

CLEARINGHOUSE



# Patient/Provider Profile (S/UR) Conference Report

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June 8-10, 1977

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U.S. DEPARTMENT OF HEALTH,  
EDUCATION, AND WELFARE

Medicaid Bureau



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PATIENT & PROVIDER PROFILING (S/UR)

Conference Summary

sponsored by

The Institute for Medicaid Management  
Medicaid Bureau (MMB), Health Care Financing Administration  
Department of HEW

in

Atlanta, Georgia  
June 7-10, 1977

Prepared by:

Pacific Consultants  
470 L'Enfant Plaza  
Washington, D.C.





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## PREFACE

The Patient and Provider Profile Conference, one of a series of national conferences being conducted by the Institute for Medicaid Management, was held in Atlanta, Georgia, June 8-10th, 1977 at the Sheraton-Biltmore Hotel. The purpose of the conference was the exchange of information and ideas between State and Federal personnel on a variety of subjects dealing with Surveillance and Utilization Review, one method of profiling, as well as with profiling topics in general. Profiling is a method of utilization review mandated by the Code of Federal Regulations 45,250.18 (a)(1)(ii). The conference provided a forum for reviewing State approaches to the development and implementation of a patient/provider profile utilization review program. State and Federal personnel, as well as a limited number of experienced consultants from the private sector, were invited to describe their approaches and experiences to an audience of State Medicaid personnel whose areas of responsibility included utilization review. Nearly 200 participants attended, representing forty-one states, various federal offices, and ten private organizations.

To provide a conference format responsive to the varying backgrounds and experiences of state personnel, the conference was organized on two tracks.



For those states currently developing a patient/provider profiling program, an agenda was constructed to provide for:

- (1) an introduction to the various types of profiling systems, e.g. S/UR, MEDRX, AMOEBA, etc.
- (2) an overview of successful state strategies for addressing design, implementation, and operational problems confronting profiling programs.
- (3) state demonstrations of successful operation and measurable results.

For those states having well-developed patient and provider profile programs in operation, an "experienced" agenda was developed, with an emphasis on exchange of information and experiences and on refinements of existing programs and systems.

In addition to the panel presentations scheduled for the "developing" states, workshop sessions were held to address basic strategies and methods for overcoming specific design and implementation problems that developing states have encountered. Experienced states that have successfully resolved these common problems were invited to develop and lead the problem-solving sessions.

This report provides a summary of the Patient and Provider Profile Conference. In addition to providing a detailed agenda of the conference we have also included summaries of the materials presented by each speaker. Section IV contains a description of each workshop and a completed workshop worksheet. The workshop worksheets were designed to provide a strategy/methodology instrument for addressing and overcoming the problems identified for each workshop.

Conference participants were asked to evaluate the conference and make suggestions for future sessions. A summary of their evaluations is provided in Section V, along with a copy of the conference critique questionnaire. Section VI contains a directory of conference participants.

AGENDA

PATIENT AND PROVIDER PROFILE (S/UR) CONFERENCE

JUNE 7-10, 1977

Tuesday, June 7, 1977

6:00 P.M. - 8:00 P.M.      Registration

Wednesday, June 8, 1977

8:00 A.M. - 8:45 A.M.      Registration

8:45 A.M. - 9:00 A.M.      Welcome

Larry Levinson  
Acting Director, Division of  
Program Monitoring  
Institute for Medicaid  
Management, MMB,  
HCFA, HEW

9:00 A.M. - 9:30 A.M.      Keynote Address

M. Keith Weikel, Ph.D.  
Acting Director, Medicaid  
Bureau, HCFA, HEW

\*9:30 A.M. - 9:50 A.M.      Purpose & Objectives of  
Patient and Provider Profile  
Systems

Dan Boyle  
Institute for Medicaid  
Management, MMB

\*9:50 A.M. - 10:30 A.M.      Description of Profiling  
Systems: S/UR, AMOEBA,  
HEWCAS

Dan Boyle  
Institute for Medicaid  
Management, MMB

MEDRx

Bruce Flashner, M.D.  
Consultant

. . . . .

\* States with developing patient and provider profile  
systems (S/UR)



\*\*9:30 A.M. - 10:30 A.M.

S/UR Statistics

Charles K. MacKay  
Program Analyst, MMB,  
IMM

10:30 A.M. - 11:00 A.M.

Coffee Break

\*11:00 A.M. - 12:30 P.M.

Problem Solving Workshops:  
Exception Criteria Development

Workshop I - Developing Exception  
Limits for Provider Profiles

Linda Bilheimer, Ph.D.  
Health Economist Consultant  
Arkansas Dept. of Social Services

Workshop II - Developing Exception  
Limits for Recipient Profiles

Mike Hofmeister  
Minn. Dept. of Public Welfare

Workshop III - Developing Exception  
Limits for Long Term Care  
Recipients' Profiles

Kent Gray  
Utah Dept. of Social Services

\*\*11:00 A.M. - 12:30 P.M.

Presenting the S/UR Story to  
Providers and Other Interested  
Parties

Tom Gaylord  
Director, S/UR  
Minn. Dept. of Public Welfare

Larry Drost  
Asst. Chief, Div. of Technical  
Services  
Michigan Department of Public  
Health

Physician representatives -

Daniel Hamaty, M.D.  
Conn. Health Plan

James Pilliod, M.D.  
New Hampshire P.S.R.O.

. . . . .

\*\* States with operational patient and provider profile  
systems (S/UR)

12:30 P.M. - 2:00 P.M.	Luncheon
*2:00 P.M. - 3:15 P.M.	<p>Securing the Resources for Patient and Provider Profile Systems (S/UR)</p> <ul style="list-style-type: none"> <li>- Staffing Problems and Require- ments</li> <li>- Demonstrating Cost Effective- ness and Budgeting</li> <li>- Legislative Support &amp; Public Relations</li> </ul> <p>Stuart Paterson Chief, Div. of Health Services Review Michigan Department of Public Health</p> <p>Larry Drost Asst. Chief, Div. of Technical Services Mich. Dept. of Public Health</p> <p>Tom Gaylord Director, S/UR Minnesota Department of Public Welfare</p> <p>Physician Representative -</p> <p>James Pilliod, M.D. New Hampshire</p>
**2:00 P.M. - 3:15 P.M.	<p>Weighting and Ranking S/UR Exceptions</p> <p>Tom Blunk Blue Cross/Blue Shield</p> <p>Linda Bilheimer, Ph.D. Health Economist Consultant Arkansas Dept. of Social Services</p>
3:15 P.M. - 3:30 P.M.	Coffee Break
*3:30 P.M. - 5:00 P.M.	<p><u>Problem Solving Workshop: Patient &amp; Provider Profile System (S/UR) Resources</u></p> <p><u>Workshop I - Background Require- ments for Program Personnel</u></p> <p>Paterson (Mich)/ Nelson (Minn)</p>

Workshop II - Demonstrating Cost Effectiveness

Drost (Mich)

Workshop III - Communicating the Program to Provider Groups

Gaylord (Minn)/Bonhag (Mich)/  
Pilliod (NH)

Workshop IV - Training Program Personnel

Koski (Ohio)

**\*\*3:30 P.M. - 5:00 P.M.**

A State Revamps S/UR - S/UR II

Priscilla Carney  
Dept. of Health and Welfare  
Augusta, Maine

Susan Fox  
Professional Health Research  
Burlingame, Calif.

Melody Chasen, R.N., M.P.H.  
Professional Health Research  
Burlingame, Calif.

5:00 P.M.

Social Hour

Thursday, June 9, 1977

**\*9:00 A.M. - 10:30 A.M.**

Implementing and Interfacing  
Patient and Provider Profile  
Systems

User Role in Implementation

Mike Tristano  
Director, Medical Audit and Review  
Illinois Dept. of Public Welfare

Interface with Other Forms  
of Utilization Review

James Cannon  
Utah Professional Review Organization

Monitoring P.S.R.O.

Sam Rutch  
Ohio Dept. of Public Welfare

\*\*9:00 A.M. - 10:30 A.M.

S/UR Approaches to Long Term  
Care (LTC)

Profiles of LTC Recipients

Kent Gray  
Utah Dept. of Social Services

A Data System to Manage the  
Utilization Control Program

Bob Tyndall  
Texas Dept. of Public Welfare

10:30 A.M. - 11:00 A.M.

Coffee Break

\*11:00 A.M. - 12:30 P.M.

Problem Solving Workshops:  
Patient and Provider Profile  
Program Development Strategy

Workshop I - User Role in  
Implementation

Mike Tristano (Ill.)

Workshop II - Interfacing with  
Other Forms of Utilization  
Review

James Cannon (Utah)

Workshop III - Monitoring  
P.S.R.O.

Sam Rutch (Ohio)

\*\*11:00 A.M. - 12:30 P.M.

S/UR Approaches to Surveillance  
of Inpatient Hospital Care

Staff, Institute for Medicaid  
Management  
Medicaid Bureau, HCFA

12:30 P.M. - 2:00 P.M.

Lunch Break

\*2:00 P.M. - 3:30 P.M.

Patient and Provider Profile  
Applications

- Educational/Quality of Care

Aida A. Leroy/M. Lee Morse  
Health Information Designs, Inc.  
Washington, D.C.

- Administrative/Management -  
Factors Associated with  
Successful Implementation  
of a Profiling System

Dan Boyle  
IMM, MMB, HCFA

- Fraud and Abuse

James Warfield  
MMB, HEW

\*\*2:00 P.M. - 3:30 P.M.

Making Treatment Analysis Work

Tom Blunk  
Blue Cross/Blue Shield  
Indiana

William Flinn & Carl Collins  
Consultec

3:30 P.M. - 3:45 P.M.

Coffee Break

\*3:45 P.M. - 5:00 P.M.

Problem Solving Workshops:

Workshops I, II, III, IV -  
Mock Profile Review

Susan Fox  
Professional Health Research  
Burlingame, Calif.

M. Lee Morse  
Health Information Designs, Inc.  
Washington, D.C.

\*\*3:45 P.M. - 5:00 P.M.

Field Investigations

Bernice Koski  
Ohio Dept. of Public Welfare

Patricia Nelson  
Minnesota Dept. of Public  
Welfare



Friday, June 10, 1977

9:00 A.M. - 10:30 A.M.

Case Presentations

Texas - Bob Tyndall

Arkansas - Sharon Marcum

10:30 A.M. - 11:00 A.M.

A Professional Association  
Perspective

Robert W. McMartin, D.D.S.

V.P. of the Association of

Medicaid Consultants

Atlanta, Ga.

Byron Oberst, M.D.

American Academy of Pediatrics

Omaha, Neb.

11:00 A.M. - 12:00 P.M.

Desirable Features of S/UR

Dan Boyle

IMM, MMB, HCFA

William Flinn

Consultec

12:00 P.M. - 12:15 P.M.

Closing Remarks

Larry Levinson

Acting Director, Division of

Program Monitoring

Institute for Medicaid

Management

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END OF CONFERENCE

CONFERENCE INTRODUCTION

Larry Levinson  
Acting Director  
Institute of Medicaid Management  
Medicaid Bureau  
Health Care Financing Administration

SPEECH OUTLINE FOR THE  
MEDICAID MANAGEMENT CONFERENCE  
ON  
PATIENT/PROVIDER/PROFILE

I. On behalf of the Institute for Medicaid Management I would like to welcome you to the fourth of a series of national conferences on major issues in the Medicaid program. I want to express my appreciation to Pacific Consultants, Incorporated, of Berkeley, California for providing support toward the development and planning of this, the Patient/Provider/Profile conference. Further, I do not want to overlook the role of the States, which in partnership with us, saw the need and supported our efforts to create a forum through which we could, together, begin to share in the realities of learning to be effective managers of a very important segment of the country's health care financing system. Your presence here today would seem to confirm our mutual interest as managers who wish to strengthen and build on the experiences that each of us have had in the work-a-day world of health care financing.

II. Overview of the conference and plan for future conferences sponsored by the Institute.

. To set this conference in proper perspective with the Institute's objectives and mission, one needs to be aware of at least two concerns - the escalation of the



Medicaid program costs and the weaknesses in the management of the program to date.

Program expansion and the health inflation spiral syndrome have pushed the cost of Medicaid to the limit. Total Federal and State Medicaid expenditures have risen from \$4.7 billion in Fiscal Year 1970 to \$15.3 billion in Fiscal Year 1976, an increase of 223 percent. Total Medicaid costs are projected to rise to \$33.1 billion by Fiscal Year 1982, an increase of 117 percent over Fiscal Year 1976 costs.

Secondly, the management of these Medicaid expenditures has historically been less than ideal both at the Federal and State levels. Further, we need to recognize that as we look back and consider how we have managed the program, that there has not existed, nor does there exist presently overall, the quality and quantity of staff nor the utilization of appropriate technology to maintain program integrity or to maximize the effectiveness of program expenditures.

The establishment of the Institute for Medicaid Management provides the impetus and some of the resources to begin meeting the training and technical assistance needs of the States as a response to the second of the two concerns just mentioned. For example, this conference is specifically keyed to a consideration of the concept(s) relating to patient/provider profiles.

Our agenda for the conference will be broad ranging and structured to include basic profiling capability that each of you may wish to consider either from the vantage point of just being in the early stage of developing your profiling capability, or as one who is looking for specific ideas for use in improving the performance of your currently operating S/UR system(s). The conference will run on two tracks - one for states with certified MMIS systems or other sophisticated profiling systems and one for those states who are interested in implementing effective profiling systems.

The conference will concentrate on the proper use of provider and recipient profiles as a management tool to monitor the utilization of services to insure and document the appropriateness of the services for which claims are made for reimbursement by the State agency.

We will not formally address specific computer system development topics, but will be primarily program oriented. However, we do have experts with us from some very sophisticated State programs. They will, I am sure, be willing to answer your questions. Further, Federal representatives with much S/UR experience are here and willing to help. You will recall that this conference is one of a series of similar conferences that the Institute has sponsored. The schedule for the

remainder of this calendar year looks something like this (copies of our calendar of events will be provided in your conference kits), which we feel will be of interest to you.

- (1) On July 19-22, 1977, we will sponsor a conference on Institutional Reimbursement with emphasis on alternative forms of reimbursement. This conference will be held in Milwaukee, Wisconsin.
- (2) Another conference is planned for September 8-9, 1977, during which time we will be talking about issues relating to Independent Professional Review of care for the mentally retarded. This conference will be held in Kansas City, Missouri.
- (3) Three multi-State workshops on Third Party Liability remain on the Calendar. The workshops will be held in Albany, New York on June 26-27, 1977; Pittsburgh, Pennsylvania on June 28-29, 1977, and Tulsa, Oklahoma on September 27-28, 1977. These are intended for participants from neighboring states.
- (4) A conference is planned during October 1977 which will cover the subject of Drug Utilization Review/Maximum Allowable Cost regulations. The location and dates have not yet



been confirmed.

- (5) A workshop for certified MMIS states is scheduled for next week in Washington, D.C.

The Institute for Medicaid Management's plan for future events is contingent on having you tell us what would be of greatest value to you. We would appreciate having your suggestions in order that we can plan ahead for calendar year 1978. We have already been given some ideas that are under active consideration. One such suggestion was to have a conference/workshop on statistical reporting. We have tentatively scheduled this conference for March 1978 and hope to be able to give you an update on this well in advance of the scheduled conference.

Other proposals that we have under consideration, but not yet fully developed include such subjects as:

- (1) Budgeting - State versus Federal
- (2) Health Care Financing Administration - Organization and operation interfacing
- (3) Medicaid Management Information Systems
- (4) Professional Standards Review Organization - interfacing with the Medicaid agency
- (5) Eligibility
- (6) Mental Health and Mental Retardation

As you know, the Institute's scope of activities is not limited to the sponsorship of conferences and

workshops, but rather includes plans to provide other means of strengthening the training and technical assistance capabilities of the program. Our plans include being able to provide the following resources:

- (1) Develop Training courses or materials to meet State defined general training needs as well as to solve specific training problems.
- (2) Train State staff who in turn can train others of their staff.
- (3) Provide or arrange for the loan of Federal or State staff with specialized expertise to States needing assistance in special areas.
- (4) Identify and disseminate information about successful management practices through the Institute's Journal for Medicaid Management.  
(The first issue of the Journal will be released within the next two weeks.)
- (5) Evaluate advances in hardware and software training technology and advise States of their availability and applicable use.
- (6) Develop and establish a demonstration center which would produce instructional materials too costly for States to produce themselves.
- (7) Arrange for provision of specific technical assistance by contract where necessary to meet a State's management problem.

An Information Memorandum has been sent to each of the state agencies requesting the following information for use in the Institute's work-plan activities for Fiscal Year 1978.

- (1) Identification of the Medicaid administrative areas where you feel you need help to resolve your problems or to upgrade Medicaid management.
- (2) Identification of the number of new and/or replacement staff you employed during Fiscal Year 1976 to work in some way with your Medicaid program.
- (3) Descriptions of your program for staff development, including whether you have as part of your staff, an individual hired specifically to manage your training and/or staff development program.
- (4) Identification and collection of pertinent materials on those areas of your program that you feel have proven to be good or exemplary practices and therefore might be worthy of publication for other State agencies who are seeking such ideas for their programs.

The States' response to these items as well as any additional suggestions will be very much appreciated because we are now in the process of establishing a repository,

for clearance and reference purposes, to help States resolve like problems and concerns that may have been solved.

We welcome your comments and suggestions regarding this conference's serving as a medium for improving the management of the Medicaid program.

Thank you.





## I. Conference Papers

PROFILING AS A MANAGEMENT TOOL

Speech

M. Keith Weikel, Ph.D.

Patient and Provider Profile Conference

Atlanta, Georgia

June 8, 1977

I'd like to begin by thanking those who have played major roles in the organization of this conference -- to Larry Levinson and the Institute for Medicaid Management, Don Nicholson and the Division of Utilization Control, and to Pacific Consultants. I think that it will become clear in the course of what I have to say that I attach a lot of importance to the function that you are here to discuss.

Profiling, and one particular way of "doing profiling" - Surveillance and Utilization Review, is one of the principal means of program management that we have available. When I gave the Kaufmann Memorial lecture at Ohio State University in 1973, I advocated a system of review which would deal with cost and quality-of-care concerns at the "micro" level--the provider/patient/institution interaction--because this would not only place our attention squarely on the point at which costs, however set, are incurred, but allow us to examine the quality of care given at the same time, and with the same means.

Much of what I was talking about is now present in the various profiling mechanisms that have come into existence, particularly S/UR. In light of the reorganization, I have been thinking about profiling as part of a generalized management strategy. Along the road to doing that, some points occurred to me that I'd like

to present to you.

If we define "management" as the direction of organizations towards the resolution of problems, and the achievement of goals, through rational allocation of available resources, the problems that we face are management problems just as much as the more "classical" ones we might think of.

The "management" notion is currently popular, as though management were some new feature that will shortly be added to the set of tools available to public administrators. This sort of talk frankly irks me a little bit, because as far as I can see management is just what I have been talking about--and doing--for a number of years.

I've been pressing the point that we need to think of what we are doing as program management for some time. The Institute for Medicaid Management seems to me to be one of the best ideas for facilitating program management that I've seen, and I hope that this conference will make you as enthusiastic about it as I am. Medicaid is managed on a state basis, and it has been clear for some time that the Federal role has to be that of assisting the States in this area. If we are to fulfill that role, we have to put the information where the responsibility lies--with you. One of the major purposes

of the Institute for Medicaid Management is enhancing the process of State-to-State exchange: this conference is an example--and I hope that it will lead to the same sorts of efforts in other areas.

We can learn something if we look at some of the management models that are about. Most of the models that are currently popular are derived from looking at managers in large, highly technologized, unregulated corporations. Even so, a lot can be learned from seeing the ways in which the model does not fit. The fact that it does not, and the ways in which it doesn't, are in turn rather instructive in looking at profiling. In fact, I think that it leads pretty directly to the conclusion that some variety of profiling has to be one of our major management tools.

I can identify three areas of difference between public and private management. Two of these are general, and rooted in the nature of public administration, the other is peculiar to the Medicaid program. There are doubtless other differences, but these are the main ones.

The first is the relative inflexibility of the program itself. Any public administrator must administer a program whose concept and means of action are dictated by a legislature which will have no hand in running the program, and which expect that it will be run so as to



carry out their intent, and to have the results that they expect. The desire of the current administration to reorganize the federal government is a given in corporate practice when a new chief assumes office. There, a new administration means a change in practices and structures, and that whatever the length of tenure of the leadership, "fine-tuning" goes on all the time. This is not the case with the change in administrators in the public realm. Much can be changed within the program, but major structural changes require legislative approval.

The second major difference is that the choice of the timing of change for the public manager, in contrast to the private manager, is extremely limited.

The reason is the "short attention span" of the political process. The public administrator is, hopefully, not involved directly, but he works within a political context, and it is a fatal error to fail to recognize this. First, he has to recognize that what may be a crash priority for him may be only one of many such crash priorities for his superiors. Second, in the political arena the opportunities for change--remembering that in most areas of a public program, change means legislative change only--may disappear quite rapidly.

Finally, the public administrator is, in most instances, stepping far out of line if he attempts to influence the process of change to any great degree. So it must be recognized that, beyond narrow limits, independent action to obtain what one wants may be the surest way of not getting it.

The upshot of these two general points is that the public administrator must, quite often, operate with levers that aren't the obvious ones. Again and again when successful public managers have been asked the reason for their success, their response has been that they were able to find the points at which they actually could control the program, and operate from those. Often, these points were not the ones that common sense would have dictated. We all know this much.

Although my comments apply to a level of public management that may seem rather high up, they apply to any level. They particularly apply to the relationship of the State Medicaid administrators and the State legislatures.

Let's, then, see if we can get a grip on the nature of the third difference between "classical" and Medicaid management by looking at some statistics.

In sheer size, the program has moved with a pace that can only be described as revolutionary--growing from \$1.6 billion in expenditures in Fiscal 1966 to

an estimated 17.2 billion in Fiscal 1977, with 24.7 million recipients of services estimated for 1977.

(1) The penetration of Federal funds into the health care field, and into certain areas in particular, was little short of incredible. The program provided 8% of the cost of hospital care and 49.8% of the cost of nursing home care in 1976,<sup>1</sup> while serving a population that numbered 10.31%<sup>2</sup> of the U.S. total. (2) Medicaid as a whole provided 11.6% of the total health care dollars expended in the U.S. in Fiscal 1976; the figure for all public sources was 40.2% of the total.<sup>1</sup>

A rapid growth of the program and an enormous penetration into the long-term care field, however, do not make a revolution in health care. What is revolutionary becomes clear only when we look once again at the figure of 40.2% of total health care costs coming from public funds. That means, my friends, HCFA. One of the advantages of the reorganization is that most of this 40.2% is under one umbrella. There is no segment of American life that I can think of, with the possible exception of higher education from 1957 on, that has been so deeply or so rapidly affected by Federal initiatives.

There has been a revolution in American health care, Medicaid has been a major part of it, and there is going to be no chance of going back--we can only go forward,



and become more competent and more efficient at managing what has been created.

It has been a revolution without reform. That is a rather strange notion; revolutions are supposed to go far beyond reform. In Medicaid, reform hasn't caught up with the revolution. Frankly, we are still searching for the reforms that will solve the problems that have occurred in the program, while leaving intact all that is best about American health care.

Just a bit short of four years ago, I borrowed a quotation from the editor of Scientific American, Gerald Peil:

"... American medicine is a high technology, which likes to think of itself as a cottage industry. It is a big business run by small businessmen. It operates on giant public subsidies, like other big businesses, and puts itself forward as the heartland of the values of private enterprise."

I am quite safe in saying that this picture has not changed very much in those four years. Indeed, it is more the case today than at that time.

American health care is a paradox in itself, and, by operating on a fee-for-service basis, the Medicaid program shares in that paradox. For one thing, it must spend enormous sums, which have a major impact on all segments of health care, in tiny amounts. For another,

the point at which costs are generated, the only point at which our efforts can be expected to have any effect, is the provider/patient relationship. And it is precisely here that the traditional practices of medical profession, and the nature of quality medical care itself, demand that we interfere as little as possible.

Despite the fact that efforts such as the administration's hospital cost containment program can be expected to have major impacts on the program, and on health care generally, it will be the case well into the foreseeable future that the meeting of patient and provider will be the key point at which the whole structure of Medicaid expenditures will be determined. This is due simply to the fact that what we are paying for when a patient goes to a provider is the provider's professional judgement as to the necessary medical resources and their application.

This is the third major difference that I want to point out between the model that has to be used for managing Medicaid, and the classical management models: I have already noted that change is difficult, and depends on external factors to a great degree--we cannot look to change, therefore, as the key to management. We have to perfect what we have, and no change in legislation or organization is likely to alter the nature of health

care itself to any great degree. The third difference, then, lies in the fact that at precisely the point where we ought to apply leverage the nature of health care itself demands that we not fully apply it. We will never be able to dictate by fiat what each provider or institution does for each patient. To even think that we could is folly. The problems that flow from the fact that we cannot exercise complete control at this point, by the application of regulations, policies, or legislation, are all too well-known.

You are all aware that, besides the problem of cost escalation, fraud and abuse has been a major area of concern, with the public, with members of Congress, and with Medicaid administrators. We are just not dealing with intentional fraud or intentional abuse whenever we see a case of "misutilization", however one wants to define it. There is always the possibility that a physician, burdened with the care of a large number of patients, will simply slip into a pattern of practice that is not ideal, either in terms of quality of care rendered, or in terms of cost. What can be said about physicians here can equally be said about institutions, and indeed of all health care providers.

In managing the Medicaid program then,--that is, directing the available resources in the most economical fashion possible to attain the goal of providing quality



health care to a segment of the American population who would otherwise not have it--we need some device that operates within the legal constraints of the program, operates with a high application of effort over a period of time but is useful as a device for addressing current problems, and impacts on the program at a point of cost generation, in a way that assures both economy and quality of care, and which operates at the level of provider/recipient interaction.

It is pretty obvious that there is no one program, technique, or policy that meets all those demands, no one ideal management device for Medicaid. But profiling can make a very large contribution.

Profiling is not only theoretically a good device; practically it can have, and has had, dramatic impacts. I do not want to advocate dollars as the sole, or even the primary legitimate measure, but it is worth noting that in one state the profiling unit, over a recent period, had \$20,000 more in recoveries (over one quarter) than its \$140,000 operating cost; if that continued through a year, the unit would show an \$80,000 "profit." Another way to look at this is not from the perspective of recovery, which is chancy, but from the perspective of control. It is estimated that 900 million dollars were lost to fraud and abuse in 1976. This was 6.43%

of the total program budget for that year. If we take this as a measure of misutilization, and assume that profiling works at 50% efficiency in terms of detection and correction, the savings, if projected back over the life of the program, would amount to 27% of our total budget for Fiscal Year 1977. There is no more graphic argument for the cost-effectiveness of profiling.

You all, I'm sure, have heard the usual arguments-- that profiling detects an aberrant pattern of care so that corrective action may be taken. In cases of actual fraud or abuse it is likely to serve as a major detection resource. This is due to the fact that while one can falsify a single bill, one cannot falsify an entire pattern of practice; fraudulent claims lead to aberrant profiles. Profiling is the only device we have for focusing exclusively on the critical provider/recipient interaction.

I want to mention some finer points, because they will be useful to the group of States that is just starting out with S/UR systems, in connection with MMIS development.

The first of these is that S/UR, and any profiling mechanism generally, is useful only if it is "fine-tuned" so as to deal with what experience shows were the critical areas of cost and utilization generation. Pharmacy services have proven themselves to be an area which is easily dealt with and therefore is a good area to



approach first. The same can be said of inpatient hospital services. On a finer level of detail, if certain types of providers, (within the broader classes of physician, pharmacy, and so on,) have been prone to misutilization, it is logical to concentrate on them.

Second, even after this is done, profiling mechanisms have not been used to anything like their full potential. It would be a waste of time, effort, and dollars if the capacity of mechanisms like S/UR to concentrate on specific areas of misutilization were not used. I am sure that you are aware of the congressional concern with unnecessary surgery. An analysis of the surgery area, using perhaps a tenth of the items available in an S/UR system, might reveal a lot. Even after a profiling system is running and has been focused on problem areas, we should plan carefully and creatively the analyses that we want to use it for.

In profiling we have a tool that can "take the temperature" of the program in terms of cost, utilization, and "leading indicators" of quality of care, no matter what the environment of regulations, policy, etc., may be.

Let me conclude this point: once the profiling system that your state has chosen is in operation, I ask you to do three things--one, don't let profiling become a "poor relation" to other program integrity activities in the state. There is no effort in the program inte-

grity area that profiling activity can't lend some support to, and any one of them is likely to be poorer without it. Two, as payment systems become more sophisticated, there will be an increasing use of edits that aim at utilization control. Your profiling mechanism can be an important source of feedback on the results of front-end edits, assuming that, like S/UR, it runs from the state's paid claim file. Third, the profiling system can be a source of information on the effects of policy options that have been chosen, and therefore a guide to future policy choices as well.

The final plea that I want to make is that an effort be made to encourage provider acceptance of surveillance by profiling. This is an area that we have neglected, and it's remarkable that we have encountered little provider resistance to the use of profiling mechanisms. As we move towards national health insurance, and there is more detailed discussion of the mechanisms that will be used, we will have to be prepared to defend profiling as the least burdensome method of review that can be found, and will face the need to dispel the impression on the part of providers that our own version of big brother is watching them.

In closing, I would like to encourage each of you to meet the current challenges by using all available

methods to the fullest, in particular, by ensuring that your States have the capacity to produce really useful profiles, and, for those States with the S/UR, by ensuring that the systems now in place are used to the fullest extent possible. I hope that what I have said, and what will be said by others at this conference represents a useful contribution to those ends.

<sup>1</sup>Page 8 - Data on the Medicaid Program, Fiscal Years 1966-77, pp. 26 and 31.

<sup>2</sup>Page 8 - Based on Department of Commerce population estimate as of 12/31/76, and Medicaid recipient data from 1 above, p. 31.

PURPOSES & OBJECTIVES OF PATIENT &  
PROVIDER PROFILE SYSTEMS

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In 1976, Medicaid paid \$14,641,773,000 for medical care afforded to 23,894,000 recipients; the average payment was \$613. A single figure for the number of services that were rendered to those recipients is hard to come by for a number of reasons. If, however, we assume conservatively that each of these recipients received 10 services, there were at least 230,894,000 individual provider/patient encounters in 1976.

We have to be concerned with at least three dimensions of each of these encounters if we are to manage the program in a way that leads to the achievement of its goals. We have to control -- somehow -- the cost of each of those encounters, ensure that the care given in each case is quality care, and ensure that it is necessary and sufficient in terms of volume, scope, and duration.

This is only part of Medicaid management, but it is a crucial part, and one that regulations, prepayment review, and so on can only go so far towards achieving. Remember that we are talking about the control of nearly 240 million encounters.

A cost can be incurred under the Medicaid program only when a provider gives a service to a patient and



bills us for it. This interaction is, of course, the only way that a recipient can receive care. The point may seem elementary, but it is a key to the whole logic of profiling.

Given that the locus of cost generation and care generation is the provider/recipient interaction, it is clear that this is one of the places that we ought to look--in addition to reimbursement policies, fee schedules, and so on--for leverage points to control costs and to ensure an adequate supply of the services that recipients need. But now that we have located this as one focus where management efforts ought to be applied, how do we apply them?

One's first thought is to write Federal or State policies to control the interactions, to set up peer review groups, and so on. And it is valid. At the same time, however, it has to be recognized that what we are obtaining when we pay a provider for a service, is the application of the provider's professional judgment as to the allocation of resources for the best service to the patient. This is a medical resource management decision although we may not care to characterize it as such, it is the major thing that the Title XIX program pays providers for. Since we are purchasing medical judgment, consequently it makes little sense to specify exactly what a proper commitment of resources

at the provider/patient level is, from "on high". Translated into the terms of the ongoing debate on Medicaid regulations, this supports the demand on the part of providers for non-interference in their exercise of professional judgment.

One may assume with a good margin of safety that no matter how much the Medicaid--or any successor program--attempts to regulate the individual provider, there is a very definite point of no return. A recurring thought which would have us adopt model Medicaid treatment standards dictating proper ranges of treatment by diagnosis is probably going too far, especially in high volume states--crossing the line from efficient controls to inefficient ones. Considerations of this sort can be multiplied, but the point to stress is that the degree of control over the individual provider is limited precisely by the nature of what the program pays for.

But now consider the fact that just to the same extent that the program depends on the provider for resource - allocation decisions, the provider, having been entrusted with that responsibility can inadvertently or otherwise abuse, even defraud the program, or engage in some other form of misutilization, with enormous consequences. As Dr. Weikel mentioned the latest MMB

estimate for the cost of fraud and abuse nationwide is 6.43 percent of the program's expenditures, or 900 million dollars. Here "fraud" means deliberate presentation of false claims and "abuse" means repeated violation of State and Federal laws and regulations. "Misutilization", a broader category that encompasses these, might be defined as "an activity that results in a charge to Medicaid that does not represent the cost of quality care in necessary and sufficient amounts", is doubtless of even greater extent.

It can thus be seen that while recognizing the necessary freedom of providers, we must find some way to maintain a degree of control over the services we purchase from them. The profiling concept is a response to this management need.

At this point I think we could use a little more precision, so I'd like to give you a simple definition of profiling. I mean by "profile" a document that is produced on a post-payment basis, and is intended to provide, by one means or another, information that allows for the detection of instances of exceptional utilization. Of necessity, when we talk about profiling on more than a very small scale, we are talking about profiling done by an automated system.

I think that I should also mention that both of the



profiling systems that MSA has studied extensively-- the MMIS' Surveillance and Utilization Review Subsystem and AMOEBA--use statistical techniques of a fairly elementary sort to detect exceptional utilization and produce profiles on the providers whose practices are aberrant. The use of statistical techniques, or their equivalent, is crucial to profiling.

When I talk about the production of profiles on a post-payment basis, I mean, ideally, that profiles are produced from data that results from the States claims payment operation, and, again ideally, data that results from stringent editing on a pre-payment basis. In profiling, we want to detect patterns of exceptional utilization, not typographical errors or provider failure to understand how to fill out billing forms.

Exception-based profiling means simply this: we can assume with safety that most providers are giving adequate, high-quality care. What we want is some system that will lead us to those who may not be doing so, so that human investigations can arrive at a decision and so corrective action can be taken. If we do not have some device for doing this, we run on sheer intuition, for example, making the assumption that a high-volume provider is the most likely "suspect" for exceptional utilization. This can be true, but it most certainly is not always true.

A "profile", then, as I want to talk about it, is a computer-produced document that is generated on a post-payment basis and is intended to aid in the detection of instances of exceptional utilization.

"Profiling" on a post-payment basis is required by 45 CFR 250.18(a)(1)(ii). This leaves a lot of ground open, however, as this regulation is general, calling for recipient profiles, provider profiles, and use of exception criteria, with no elaboration. Still it is a requirement on all States, not just the ones implementing improved management systems.

The upshot is that there are no abstract "profiles"; one can only discuss methods of profiling and the results that accrue from them. No one method of profiling can obviate all the minor difficulties that occur when automated systems are used for the surveillance of medical utilization.

What is important is the results. If a profiling method succeeds in detecting misutilization and directing our efforts in the most efficient way, the foibles that occur can be corrected later.

I should stress that I do not mean that the choice of a profiling method by a State is an irrelevancy. Ease of use by the State staff, the cost of the system, the power of detection and degree of system control offered, are all important considerations.



One of the obvious factors, too, is the availability of a 90% federal match for installation of S/UR in conjunction with MMIS and 75% match for operations. The reason for this availability for matching funds is MMB's belief that the MMIS-S/UR is, for the great majority of States, the most effective profiling device available. At the same time, Medicaid recognizes that S/UR is not the last word in profiling techniques. We would be in a rather difficult situation if this were the case, for we certainly need to advance beyond our current expertise in order to effectively control misutilization.

With these general comments on profiling concepts I would like to discuss three approaches to profiling - S/UR which will be emphasized during this conference, AMOEBA and HEWCAS. Then Dr. Bruce Flashner will describe another approach - MEDRx.

DESCRIPTION OF PROFILING SYSTEMS

S/UR, AMOEBA, HEWCAS

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Dr. Weikel has talked about the concept of profiling. Now I'll discuss three specific approaches to profiling, and then Dr. Flashner will describe a fourth. The approaches I'll discuss are S/UR, AMOEBA, and HEWCAS. Since I work daily with S/UR, it will probably be covered most thoroughly, but even so, it will be only an introduction; this whole conference is mostly about S/UR in its many aspects.

With respect to S/UR, I'll be highlighting its major characteristics including its ability to:

- 1) Produce a prescreened set of profiles based on comparing individual program participants (either providers or recipients) against the average pattern in the State;
- 2) Limit the profiles produced to those of providers and recipients whose behavior is statistically aberrant or in whom the reviewer has a special interest;
- 3) Make post-payment utilization review a useful and manageable process; and
- 4) Provide the user with options in the approach to utilization review.

1) The first significant characteristic of S/UR is that it produces a prescreened set of profiles that have, in being produced, been compared to the average

pattern of care in the State. The particular merit of that is avoiding a common difficulty. One of the major problems that has appeared again and again in public medical care programs is the difficulty of producing a particular set of standards or criteria to judge individual practitioners by. Even with the cooperation of provider groups, the criteria that are produced are likely to suffer severely from abstractness. Most of the successful criteria sets produced to date work in a negative fashion. They give a list of tests, procedures, and treatments that ought to be done, at a minimum, in the event of a particular diagnosis -- consequently, the problem detected will be the absence of a particular treatment. When one is looking for inappropriate utilization, with an emphasis on too much utilization, this is of little help. And it is very difficult, if not impossible, to define some ideal maximum of care in response to a diagnosis. Some professors were making a career of this when I first started working for MMB in 1965.

S/UR takes a rather ingenious way around the problem. It derives an average practice pattern for all providers in a relevant peer group, and takes that as the standard. Further, since it works on a post-payment basis, from an edited tape of paid claims, it is able to update that standard literally with the receipt



of each new bill; it is thus instantly responsive to changes in the provider pool, the patient population, and in medical practice itself. There is really no need to impose an arbitrary set of standards, or to worry about the adequacy of the standard used, because it is the standard set by all the providers who participate in the Medicaid program in a particular, relevant specialty or other logical grouping. There is, of course, no need to employ human effort in the rather tedious -- and ultimately humanly impossible -- task of screening care received by individual patients.

The second major characteristic is that S/UR presents for human inspection only the profiles of providers whose care patterns, as revealed by the analysis, are statistically aberrant. It is capable of generating a profile for any provider request, but the real beauty of it is that it does not produce profiles on the vast majority of providers.

From everything we know based on field investigations, the majority of providers are engaged in giving care that is of good quality, and are not engaged in fraud and abuse. This very fact means that the ideal detection system ought to bring to our attention only a small minority -- no more than 4-5% -- of providers in any case. Although I do not wish to minimize the difficulties that attend the setting-up phase of S/UR operation, once the system has been fine-tuned and the proper provider



peer groups have been defined for it, the typical data item will have exceptions only ca. 1% of the providers. Slides on representative experience in a number of States demonstrating that this is true will be shown in later presentations. In addition, it would be well to point out that at two different places in the "classical" S/UR design, there are ways to block over-production of profiles. It is never the case that a user need "drown in paper". That has almost happened in some places, but it need not happen.

The previous characteristics provide a basis for the third characteristic: S/UR makes utilization review a manageable process. Recall for a moment that at the opening I mentioned that control of the program means control of 240 million provider/patient encounters. Even divided among 53 jurisdictions, this is simply too much to handle without the intervention of automated data processing. By using such processing, we do what no field investigation of any reasonable size could accomplish -- we consider every single encounter for which the program has been billed, establish norms, and make comparisons to the norms established by practitioners themselves to "target" those whose program performance needs further analysis and possible investigation.

I think that this is the appropriate point to emphasize that S/UR carries on this same process for

recipients. Because recipients have less control over cost generation than providers -- theoretically, virtually none -- there is less point in profiling them than in profiling providers. By doing both, however, we fulfill regulations and get a "syneristic" effect that allows S/UR to serve as a very useful adjunct to quality medical practice itself. In addition we have an opportunity to intervene in individual situations of poor, even harmful medical care.

Beyond these major characteristics, I ought to mention some of the enormous flexibility S/UR has. While this varies from State to State, it is frequent that at least 200 comparisons may be made per report run for physician providers. This is achieved by system flexibility on several levels.

The first level is that of provider peer group definition. The logical groupings within which providers are compared with one another are called class groups. Although, as one might expect, most of these are specialty groupings, experience has demonstrated the necessity of establishing separate groupings of providers, sometimes by location, and sometimes by other characteristics such as form of practice, group or individual. For example, we have a definite need to separate urban GPs and it would be a wise move to group pharmacies most

of whose Medicaid patients are in LTC facilities together. The system is open as far as class group definitions are concerned. They are user-determined and may be changed as needed.

Also flexible are the number and definitions of the report items which serve as bases for comparison. The exception control limits are also established by the user, in the event that the system default limit of two standard deviations is unsatisfactory. In addition the user can choose among time periods - one quarter ago, two quarters ago, etc.

The upshot of all this is that S/UR need not do anything that the user does not want it to. If one wants to do a special purpose run, analyzing, say, initial visits as a portion of all visits, this can be done using only four or five of the up to 200 available items. If the run is to be restricted to a few class groups, the user can command this easily. If the class group definition needs to be changed, this can be done.

This very flexibility is a problem in itself, in the sense that exploiting the full potential of the S/UR system makes considerable demand on the users. This is not, entirely, a matter of statistical or medical skills; with S/UR, we have launched upon a virtually uncharted area, and it is not at all surprising that some difficulties have been encountered, nor that, as



States with working S/UR systems have gained experience, those difficulties have been considerably mitigated.

I would like, at this point, to give a brief run through of the S/UR process. One of the difficulties with "selling" the system that accompanies any automated program is the fact that the computer tends to be regarded as a "black box" within which mysterious things happen. I sometimes think of the computer processes in terms of counting on fingers and toes -- absurdly simple in itself; the computer makes it seem complicated simply because it has millions of times the number of fingers and toes that any of us do.

Let's review the S/UR data processing steps. The first step is the accumulation of totals -- total number of providers in the class group, total office visits, total days of hospital care for patients of these providers, total number of injections, etc. Both for information purposes and to allow the user to work on the next step, defining the analysis, a report of these accumulated totals is produced.

The user next enters the data items that he wants. For example, if the system has accumulated totals of office visits, home visits, long term care visits, and hospital visits, and the user wants ratios of visits per recipient for all visits, LTCF visits, and hospital visits, it is a matter of writing a few numbers on a card

and having it punched to define these. No computer or statistical expertise need be involved, although it is of course helpful, if present. The system then tells the user, in effect, "here is what you told me to do -- check it and see if this is really what you want". This is done by means of the Parameter Control List -- which allows the user to see what instructions the computer has actually received. It also gives the data item definitions, the number of standard deviations used to set the control limits, or the limits that the user has manually entered. If the user is satisfied, the next step is the production of the Averages and Standard Deviations report. When that report is produced, the computer has already done most of the statistical analysis that it will do. It informs the user what the average is for each of the defined data items and what the standard deviation is.

The purpose of this is to give the user some idea of the range of values that are likely to be encountered in the actual exception run, and also to allow him to check for obvious mistakes in computation, which will, most of the time, derive from improper definition of the report items on the parameter control list. Once this is done, S/UR is allowed to proceed to the next step -- the printing of the Exception Control Limits report.



This allows the user to see what the limits are that the system will use. It provides a further check on the system's reading of any control limits that have been manually entered, and allows the user to judge whether the system-calculated limits are too high or too low. Here the expertise of the medical consultant to the S/UR unit will be helpful, as he or she is likely to have some intuitive idea of what an acceptable value on each item is. The General Systems Design allows for user intervention at this point by inputting a new parameter control for the exception limits that need changing.

The system next determines the number of exceptions on each item, and prints out the Exception Summary -- this tells for each item the number of exceptions that will be produced if the run is completed, and the percentage of the providers in the class group that each one involves. If this does not indicate that one will be in trouble with exception volume, the run is completed with the printing out of the profiles of each of the providers who had one or more exceptions indicated.

For Inpatient Hospitals and Physicians S/UR has a second approach to profiling called Treatment Analysis. It compares physicians and hospitals with respect to the treatment and care furnished specific to diagnostic and age group categories. For example, urban general

practitioners can be compared regarding the procedures they provided, the drug ordered, and hospital stays initiated, and the length of stays for patients whose diagnosis was diabetes mellitus and whose age ranged from 20 to 34. To express it another way - this report answers the question "confronted with a patient of a specified age range, and diagnosis, what does the provider do?" The methodology employed to generate the Treatment Analysis reports is exactly the same as that used for profile generation.

I hope this shows that the process itself, though massive and lengthy, is not at all complicated. The results that accrue from this, given the simplicity of the process, are great.

In summary, the process S/UR uses to find situations of exceptional practice or utilization is not complex in any conceptual sense. It is essentially a matter of "count-em-up-and divide". Still, given the volumes of data handled, the simple practice can be massive and time-consuming - even on large computers.

One last thought. Although S/UR identifies exception situations, it makes no judgments. Judgments are made by humans who often find that the statistically aberrant situation is medically justified.

## AMOEBA SECTION

The second system that I want to discuss is AMOEBA. AMOEBA is the acronym for "Automated Medicaid Over-utilization and Erroneous Billings Auditor". Although AMOEBA is matched only at the 50 percent rate for administrative expenses, the project was initiated in the belief that some system less complex than the MMIS could be useful to States as a control device, to be used prior to the installation of MMIS, and could also serve as a forerunner or introduction to MMIS, to acquaint State staff with the use of an automated utilization review system.

AMOEBA has two major characteristics: first, it operates on the level of individual procedure codes. Thus, pattern detection in AMOEBA is accomplished procedure-by-procedure. Secondly, AMOEBA is both an editing system and a surveillance system.

The editing side of AMOEBA is designed to identify specific bills which should not have been paid because they were in conflict with state policy. Almost any kind of policy can be handled, whether it relates to duplicate payments, fees for multiple surgery, prescription splitting, or utilization in excess of prescribed limits. Although this edit design is intended to help States identify specific bills on which recoupment can be made, the total pattern of erroneous payments to a



provider can also be seen and used in a utilization review sense. For example, if the state allows only 16 psychiatric consultations per quarter, AMOEBA can detect all billings for a recipient after the first 16 and print the recipient history with this exception and any other edits which were failed.

A modification to the system as installed in Oregon, the pilot State, will make the information available on a provider-specific basis as well.

In addition to edits based on violations of specific state utilization policies, AMOEBA edits can also be set for the detection of misutilization that is unreasonable per se. For example, it would seem that more than 13-14 refills of contraceptive pill prescriptions per year are unreasonable, or that more than two refills closer than 14 days apart are questionable. The system can be adjusted for this sort of concern.

These examples do not begin to give an idea of the power and flexibility available on the edit side of the AMOEBA system. Suffice it to say that any combination of specific procedure codes, or ranges of procedure codes, spread of days between procedures or prescriptions, and dollar amounts can be set. For the dental service edits, surfaces of individual teeth can be entered into the edit pattern as well.

The result is that a user can specify any pattern of utilization for any provider that he feels is representative of questionable utilization, and the system will print out recipient histories (or, in the redesign, provider histories) which display any aspect of these patterns of questionable utilization.

As can be seen, the history print-outs produced by the edit side of the AMOEBA system can be used as a sort of "profile". The AMOEBA design, however, has a specific profiling module built in.

The AMOEBA profile, like the AMOEBA edited history, is procedure-specific, but the idea here is the detection of an excess or deficit in the number of procedures of a particular type performed by a provider of a particular specialty.

Thus, out of the mass of procedure codes, provider names and numbers, and other data available in a State's paid claims tape, AMOEBA makes a selection by specialty, individual provider, and procedure. This provides the data by which the provider will be compared to other peers within the specialty.

For the specialty, an average number of service encounters per recipient for every procedure code which was performed at least once by at least one provider during the year, quarter, or other period considered, plus the standard deviation, are calculated.



Each provider is then ranked by his number of standard deviations from the mean on each procedure codes.

Once each procedure-specific deviation is calculated, the provider is assigned a "sum of deviations" (sum of plusses only) by which he is ranked both with all his peers in the specialty and with all providers.

Providers assigned extremely high ranks, especially within specialty, are likely candidates for a field investigation.

The provider ranking within specialty and within all providers are intended to support the AMOEBA profile, which displays the deviation score for each procedure code the provider performed during the period under scrutiny. Comparisons of variations across procedure codes can also be obtained, so that procedures likely to be abused can be examined.

A comparison of the AMOEBA profile with the S/UR profile is revealing. S/UR profiles on broad classes of procedures - surgery on the musculo-skeletal system, narcotic drugs prescribed, and so on, and concentrates on analyses of statistics related to those items. The provider history - i.e., the "profile" produced in the edit side of AMOEBA - is available in S/UR as the provider and recipient detail listing; the procedure-

specific statistical analysis, broken out in terms of procedure-specific response to a diagnosis in a patient of a specified sex and age, is available in S/UR as the treatment analysis report. AMOEBA differs from S/UR, then, in level of detail presented on the primary profiling document itself, and in the degree of system control available to the user. Because of these differences, it should be stressed once again that the contractor designed AMOEBA as a lead-in system to MMIS, and that it is not intended as a replacement for S/UR or the MMIS claims edit module in most respects. Its advantages are that it can work from a State's paid claims file immediately, with no need to alter coding systems, computer format, and so on, and can simply be "added on". The corresponding disadvantage, of course, is the need for the AMOEBA system to work from a tape that has not necessarily been subjected to a full spectrum of edits.

### HEWCAS

The next, and final, profiling system that I want to discuss is HEWCAS - The H.E.W. Computer Audit System. HEWCAS is a "profiling" device only by extension. It is rather a computer application that is designed to allow an auditor entry to a computer data file in a State. HEWCAS does this by writing computer programs that allow for information retrieval. It does this because it is a program for writing programs - in computer parlance, a compiler.

The programs that HEWCAS writes are "tailored" to the specific structure of the data base in which the State's medical records are written. Thus, there is no need to convert to a new coding system, etc. In addition, the user of a HEWCAS compiler does not even need to know, himself, much of the data base structure, as HEWCAS can work from a simple input description of the record format and the small amount of detail about the mechanical form of data storage -- disc, tape and so on.

This means that HEWCAS can, within very broad limits, answer any question about utilization that can be answered by an examination of any aspect of a State data base. Applications to date, for instance, included a relatively sophisticated assessment of the effect of intensive review in hospitals upon the frequency distributions of length-of-stay for various diagnoses.

At the same time, the flexibility of HEWCAS means that its capacity as a profiling mechanism is wholly dependent upon the skill of the user. HEW Audit staff working with HEWCAS have advanced the slogan "the computer can do the work if we do the thinking" and this is perhaps the best way to describe HEWCAS as a profiler--it can do the profiling if we can do the thinking. The user must, then, design a profile and an attendant strategy for its use. In applications in which HEWCAS has been used to fulfill functions quite similar to those of S/UR or AMOEBA, the profile design that has emerged for use has been quite similar in concept to AMOEBA or S/UR profiles, although the level of statistical analysis has been lower.

MEDICAID EXCEPTION REPORTING SYSTEM

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## SYSTEM DESCRIPTION

### Medicaid Exception Reporting System (MEDRX)

- I. Introduction. The Office of Information Systems, (Social and Rehabilitation Service) contracted with Arthur Young and Company, Inc., and their subcontractor Optimum Systems, Inc. in October of 1976, to develop an automated system to detect potential fraud and abuse in non-institutional services provided in the Medicaid program. Although the system can be used at the Federal level, it was designed specifically for State implementation. The system, therefore, was designed to be modular and flexible enough to operate in widely varying environments. Each State has its own unique legal and administrative structure, staffing skills and numbers, ADP resources, coding schemes, and position regarding MMIS. The system was designed to accommodate these wide environmental variations. The system is currently being pilot tested in New Jersey and will be operational in September 1977.
- II. Purpose. The system was purposely designed to be significantly different from the methods currently applied to the Medicaid fraud and abuse detection problem. Typically, the approach taken for most control systems was either highly statistical or

variations of standard claims processing edits. Neither of these approaches, however, was entirely suitable. Fraud and abuse investigative units currently rely primarily on tips and complaints to initiate investigations; however, this method of discovery is inadequate. Discovery is accidental or random and frequently dependent upon a great deal of statistical analysis and manual effort to support a pattern of fraud and abuse detection either administratively or legally.

MEDRX therefore, was designed to overcome these major drawbacks of the fraud and abuse efforts now underway at both the State and Federal levels. The system was designed to bring providers with questionable practices under closer scrutiny by the responsible Medicaid officials. The system incorporates automated internal logic sequences to correlate indications of possible fraudulent or abusive practices. In current approaches, these logic integrations require highly trained professionals who unfortunately are rarely available to perform these functions. MEDRX performs these analyses automatically and reports only those providers with patterns of practice having a high probability of being either abusive or fraudulent. Additionally,

provider exception reports are organized to show the problem and the data which caused the exceptional pattern to be detected. In this way, those providers apparently most flagrantly abusive may be investigated first and the data most critical to the investigation is immediately at hand, organized in such a manner as to enable the investigator to quickly begin collecting evidence pertinent to the case.

III. System Objective. The overall objective of the Medicaid Exception Reporting System is to detect fraud and abuse in the Medicaid Program, and assist the investigative and disposition functions. Assistance to investigative and disposition functions is effected by providing data which will pinpoint the type of fraud or abuse suspected and point to specific claims to be reviewed.

IV. Specific Objectives

1. Effectiveness. The effectiveness of the system must be determined by ability to detect fraud and abuse. However, it is necessary to go further. Medicaid is a major program involving the expenditure of billions of dollars annually and the involvement of hundreds of thousands of providers and recipients. The opportunities for fraud and abuse in a program this size are vast.

In terms of helping the program, it is important to eliminate the major abusers who represent a major dollar loss, rather than to search for the minor abuse or error which can occur in the claims of almost every provider at some time. The objective is to remove major abusers from the program, recover lost dollars, and put all program participants on notice that an effective fraud and abuse detection function exists. The ultimate success of the surveillance function will be found in its deterrent effect.

Therefore, the system must identify those providers whose pattern of practice indicates a high probability of fraud or abuse, making an investigation worthwhile from a cost effectiveness standpoint. Even if investigative resources were limitless, the time and money spent detecting and investigating a subtle case of abuse in a small Medicaid practice would far exceed the dollars which could be recovered or even protected from loss over a number of years. The system was designed, then, to narrow the selection of potential defrauders and abusers to that group whose removal will most benefit the program.

2. Ease of Use. A major determinant of the successful application of an automated system is its



ease of use. For the fraud and abuse detection system this implies several system characteristics:

- a. English language reports obviating the need for the user to de-code reported information
- b. Reports which pinpoint specific fraud and abuse types suspected thus minimizing the amount of analysis which must be performed.
- c. Reports which identify the claims in which the pattern of fraud or abuse was detected, which help to direct the subsequent investigation
- d. Parameters to which knowledgeable program staff can relate without requiring a statistical background.

These features are all incorporated in the system and permit maximum use of the computer's capabilities saving staff for the intuitive analyses which the computer cannot perform.

3. Low Cost. Although cost control is always an important objective, the significance of cost will vary from state to state. For some states it is a crucial consideration which may make the difference in an effective detection function. Cost can be thought of as falling into three categories:



- a. Dollars
- b. Time
- c. People

For states with small fraud and abuse detection budgets and staff, dollar and people costs are paramount. However, in an investigative environment, time may be crucial to ensure acquisition of evidence before it is destroyed. "People" costs can be kept low via the ease of use of the system described above. Dollar and time costs relate closely to configuration of the system itself (e.g., computer time, data required, volume of paper in reports). The system, therefore, was carefully designed to run efficiently using as little data as possible and producing only the paper required to precisely report findings. Such efficiency should result in the ability to run the system on a timely basis without disrupting normal computer operations, permitting that necessary data for potential abuse identification to be readily available.

- 4. Adaptability to Different States. The three preceding objectives are relevant to many systems. However MEDRX, which was designed for use by various states, has the additional objective of adaptability. This adaptability must accomodate

variations in:

- a. Available data
- b. Local regulations which affect practice characteristics
- c. Local coding schemes
- d. Local hardware/software configurations.

Although each State differs in the amount of claims data retained in an automated form, there is a basic set of data which is required for conduct of any fraud and abuse detection. However, beyond that there are levels of detail which permit increasingly sophisticated practice pattern analysis. MEDRX is capable of accommodating the various levels of data available.

Although the basic regulations for the Medicaid program are Federally established each State has its own additional regulations which cause variations in administration of the program. These regulations ultimately result in patterns of practice which for one State reveal no irregularity but in another may indicate highly suspicious activities. These differences must be accommodated by permitting local determination of fraud and abuse detection parameters. Similarly, States use different codes for procedures diagnoses, drugs, etc.; the system must be table-driven to

allow for internal interpretation of codes.

Finally, the system must be implementable on a variety of hardware/software configurations.

Although complete machine independence is more dream than reality, the system can and must be designed and programmed to minimize conversion requirements. This may be accomplished by such means as using ANSI Standard COBOL and careful modularization of functions isolating those which must be tailored.

- V. System Concept. The basic technique used in MEDRX is the application of carefully selected screens. Vendors (practitioners, laboratories, etc.) "failing" the screens are subjected to further analysis on the basis of being exceptional; i.e., as having an exceptional or unusual pattern of practice or care. A screen is defined as a test made by comparing characteristics of each member of a group against certain conditions or parameters in order to isolate individuals in the group having those characteristics. For the Medicaid Exception Reporting System, the screens are designed to examine specific aspects of providers' practices as indicated by Medicaid claims and to select exceptions based on screen parameters. These exceptions are then organized and presented in

exception reports. This concept is described more fully in the paragraphs which follow.

1. Categories of Providers and Practitioners. Because practices of various providers vary significantly, screen parameters and, in some cases, the screens themselves must also vary. Eight categories of non-institutional providers have been defined. Each category represents a grouping of provider types whose practices are basically similar.

These eight categories are:

- a. Physicians with predominantly office practices
- b. Physicians whose practice includes a large number of procedures, or surgical type services
- c. Physicians whose practice is primarily office practice, but also provide numerous procedural or surgical services
- d. Dentists
- e. Dental Surgeons or Orthodontists
- f. Podiatrists, Optometrists, other non-physician practitioners
- g. Laboratories
- h. Pharmacies

In order to clarify the separation of physicians into three categories a suggested allocation of physician types to the categories has been defined.



This is not intended to be a fixed allocation, but is intended to indicate the objective of, or distinction between, each.

Screen parameters are set for each of the eight categories, the assumption being that members of the category have sufficiently similar patterns of practice to permit use of the same screen parameters. Some screens will not be applicable to all provider categories.

2. Screen Concept. Two types of screens have been defined for the system. They are "indicator screens" and "pattern screens". The indicator screens accomplish the first selection of providers whose claims require further analysis. The more complex pattern screens are applied to that set of providers excepted (selected) by the indicator screens.

- a. Indicator Screens. The indicator screens are designed to identify those providers with practice characteristics which indicate a potential for major fraud or abuse. It must be remembered that the objective of the system is not to identify all offenders but to identify those offenders with a high probability of conviction (either legal or administrative) and whose removal represents

a significant gain to the program in terms of recovered dollars or additional dollars not lost.

Eight indicator screens have been developed. Three of these focus on providers with large practices while the other five are averages or ratios independent of size of practice.

The eight screens are:

- 1) Total amount of charges
- 2) Total number of encounters
- 3) Total number of service incidents
- 4) Average amount charged per encounter
- 5) Average amount charged per incident
- 6) Average number of incidents per encounter
- 7) Ratio of expensive service incidents to total number of service incidents
- 8) Ratio of service incidents identified with fraudulent or abusive practices to total number of service incidents

At present it is envisioned that the period of practice for review be one month and that three one-month periods be analyzed in each execution of the system (i.e., quarterly system execution). It is recognized that some indicators and in particular some pattern screens may need more than a one-month

time span to appear.

b. Pattern Screens. The pattern screens utilize patterns of service (i.e., the interrelationships of various indicators) to focus attention on providers whose delivery of service appears to be sufficiently different from others in their category to warrant detailed examination. Although the screens can be applied to any set of claims data, it is intended that they will be applied to the claims of those providers who failed one or more of the indicator screens. The applicability and sensitivity of the screen is dependent upon the detail of the claims data available.

Eight pattern screens have been designed. These screens focus on the primary areas of encounter, reimbursement and delivery of service. The eight screens are:

- 1) Indication of Yo-yoing
- 2) Indication of Ping-ponging
- 3) Indication of Gang Visits
- 4) Indication of Unreasonability
- 5) Indication of Exceptional Charges
- 6) Indication of Overutilization
- 7) Indication of Misutilization
- 8) Indication of Disutilization

The pattern screens produce the reports which are the primary tool to be used by the investigators to pursue any resultant allegations or suspicion of fraudulent or abusive practice.

The system also produces Management Reports which are used by the Program Manager to fine tune the output volume to the number of cases that can be effectively handled by his staff.

VI. System Users. Although the ultimate and primary user of MEDRX is the field investigator, there are other users involved in the establishment of parameters, workload adjustment and professional review to insure that the final reports depict those providers with the highest probability of concluding a successful investigation and disposition of the case.

The system is designed to permit the system and/or Program Manager to adjust the parameters for both indicator and pattern screens to insure that the system is accurately reflecting abusive practices and is tailored to the capability of the State to investigate those providers identified for follow-up action.

Although some States will elect to make the reports available to the investigative staff without further review, it is recommended that the Pattern Reports



be reviewed by a professional reviewer and/or a Medicaid Review Board prior to releasing suspicious providers to the investigative staff. This will assist in eliminating those providers whose practices, although quite proper, have patterns of practice which are quite extraordinary due to their clientele or locale.

VII. Staff Requirements. The system in order to be totally effective requires the involvement of at least the following personnel:

1. State Coordinator
  - Liaison
  - Guide Procedures
  - Obtain resources
  - Evaluation methodology
  - Training
2. System Staff
  - Coordinate use of State computer facility
  - Reference File maintenance
3. Surveillance Staff
  - Review System reports
  - Evaluation of results
  - Recommend providers to be investigated
4. Investigative Staff
  - Desk Audit preparation

- Conduct investigations
- Assimilate evidence
- Coordinate with State, Federal prosecutors

VIII. Hardware Requirements. MEDRX can be implemented on any hardware comparable to the IBM 360-60/70 which has a minimum of 200,000 bytes of main memory, disk storage, magnetic tape and an ANSI COBOL compiler.

IX. Software. MEDRX was programmed using strict ANSI COBOL conventions. The use of IBM COBOL enhancements were avoided in order to facilitate conversion to other hardware configurations. That is, the system can be easily installed on any hardware having an ANSI compiler as part of its software repertoire.

X. Operational Requirements. The Medicaid Exception Reporting System is designed in such a way as to require no changes to the existing State claims processing operation. Reformatting of claims to meet the data base requirements of MEDRX is accomplished during installation of the system and requires absolutely no conversion programs to be written by the State.

The system is also designed to eliminate the necessity for code conversion. The system is capable of using any State Code structure in existence without

modification.

Although the parameters could be set at absolute values during installation, it is strongly recommended that State personnel constantly monitor and refine the parameters in order to attain maximum benefits from the system.

S/UR STATISTICS - A REVIEW

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We need to start out by distinguishing several things -- fraud, abuse, misutilization, and misutilization that is statistically detectable. Without those distinctions, the detection activity in S/UR makes very little sense. With them, we can get a pretty good grip on what is happening.

Fraud is a matter defined by State and Federal law. Generally, it is the submission of false information in order to obtain payment -- classically, submission of a bill for a treatment which has not in fact been given. Abuse is repeated violation of program regulations, policies, and intent in a way that is detrimental to good medical care but is not (necessarily) fraudulent. Misutilization is a global term that includes these two. In addition to them, it can consist of the (typical) situation in which a physician has fallen into a pattern of practice that is simply not ideal, which may appear on a profile as aberrant on only one or two items. Our experience has generally been that in the latter case, the physician, when informed of the problem, changes his practice immediately. In terms of costs and of the actual quality of care that is given to recipients, however, all of misutilization needs detection and correction.

When we talk about "statistically detectable misutilization", we mean simply misutilization that will

show up, after some elementary statistical manipulation, as a pattern of practice that is different, to a statistically significant degree, from that of the provider's peers. At the level at which S/UR operates, "statistical significance" is in part a matter of human judgement. When using the "default" limit of two standard deviations for an S/UR exception, the level of significant difference occurs when a provider is different from 95.46% of his peers. (I'll say more about that in a moment.)

Let me try to translate that into money terms. I do not think that this is the best measure, but if we look at Figure 1 and imagine that the cross-hatched area represents that portion of misutilization that is detectable by S/UR and could -- assuming that the investigations and correction units work at 100% efficiency -- be eliminated, it can be seen that there is likely to be a significant dollar impact from the use of S/UR. The point to remember is that every dollar that the program expends goes partially to pay for misutilization, and that (in the case of a budget overrun) this is also true of each additional dollar spent over and above current costs. Thus, the "payoff" in terms of quality care given for each additional program dollar is highly dependent on the degree of control

over misutilization that is achieved. How much of misutilization is statistically detectable misutilization? No one knows, of course, but when one considers the fact that any and all major differences from the norm of a peer group (that can be reflected on bills submitted) can be detected by S/UR, the proportion is likely to be high--almost 100%. (The same is of course true of any other profiling method that uses statistical analysis.) And even if it is not this high, S/UR remains one of the premier management tools of the program--and is thus mandated by 45 CFR 250.18 (a) (1) (ii)..

All of the above is an introduction to get you warmed up to my subject, which is the statistical methods used by S/UR and the applications of some fairly elementary techniques to the control of S/UR systems. I frankly suspect that some of what I want to present is far too elementary for some of you and new to others; hopefully, everyone will gain something.

Let's begin by talking about populations. A population is any group of things that have at least one common characteristic. One can call the group of readers of this text a population; other examples are the words in the English language -- which have the common characteristic of being written with 26 letters and one punctuation mark; the fish in the sea, all women under age 26 1/2 in Bristol, England, and so on.



To start on a quite mundane level, let's look at Figure 2. This is the result of asking eight members of the staff of the Division of Utilization Control their weights. You will note that the series is 158, 158, 157, 89, 189, 104, 162, 155. One of the questions that can be asked is "What amount do these eight DUC staff members tend to weigh, more than any other?" The answer, found by adding up the eight numbers and dividing by eight, is 146.5 lbs. This is a measure of central tendency called the arithmetic mean. It is only one of a number of ways of measuring central tendency, but has the most intuitive appeal.

Getting to a slightly higher level of analysis, we might also ask how much, on average, the typical DUC staff member deviates from the average -- what is the average deviation from the average? If we just add up the deviations, however, the sum is zero; this is always true -- the sum of deviations about the arithmetic mean of any group of data will always be zero. One way around this is to square all the deviations -- thus giving us all positive numbers again; add them, divide-by eight, and take the square root. This is called the quadratic mean of this set of numbers, and constitutes the standard deviation of the eight values. Having the standard deviation (which is 30.83 lbs.) in hand allows us to



state that "The average DUC staff member, based on the sample, weighs 146.5 lbs. and tends to deviate from this, an average, by 30.83 lbs." (This is not a paradoxical statement.)

The point of going through this rather homely example is that this is all the statistical analysis that is involved in S/UR systems of the "classical" design. For each analysis item on a profile -- and there can be up to 200 items per run in some designs -- the average and standard deviation are calculated.

For the generation of exceptions, a third question is asked -- this last one being "How many standard deviations are needed to account for all members of the data set under consideration?" Looking back to the example above, adding or subtracting 2 standard deviations from the average of 146.5 lbs. gives us a range of from 84.84 lbs. to 208.16 lbs. This range is sufficient to account for all cases.

As can be seen by looking at the lower scale on Figure 3, where the Greek letter  $\sigma$  (sigma) represents the standard deviation, there may be distributions associated with S/UR that have a number of members who cannot be accounted for by this range of plus or minus two standard deviations. These are, barring user intervention, the exceptions.

Having gotten this far, we can talk about what I wanted to talk about all along -- which is a possible solution to a continuing perceived problem with S/UR -- the production of too much paper. The staff associated with S/UR has always maintained that the ideal situation in a State S/UR unit is to tailor the number of staff to the number of profiles produced, and not vice versa, but one must also recognize that given the condition of State budgets, this is often not a realistic possibility; and, as the use of the S/UR default limit of two standard deviations as the exception criterion has created problems in terms of volume, it will be useful to see if something can be done to meliorate the problem. What follows next may appear just a bit complicated, but it really isn't; all of it is based on the techniques shown in the example above, which are usually covered in the first two chapters of introductory statistics texts.

Looking at Figure 4, we can see a distribution that is almost "normal" -- or bell-shaped. The importance of the bell-shaped curve is that a lot of chance and biological phenomena follow it. It was a design assumption of S/UR -- and a good one at the time -- that medical practice analysis items would tend to look like this distribution when graphed. The reason is that the total provider/patient encounter is likely to be characterizable as a more or less random event.

by that I mean, not that medical care given is random, but the following -- first, which provider a patient goes to is, in aggregate, random, and determined largely by where people live. Second, which problem the patient has, although a function of age, race, sex, location, degree of health knowledge and so on in the case of individuals, will again be random in the aggregate. It was a good idea, then, that the analysis of practice items should reflect that, at least on volume-related items.

They didn't. If they did, there would be no S/UR exception volume control problem, because in a normal curve the volume in the upper tail beyond +2 standard deviations is only about 2.5% of the total. Thus, even in a group of 1000 providers, no more than about 25 would except on each item.

Given that some of the distributions are non-normal, however, it is clear that it is possible to get a lot of exceptions from some distributions. For example, look at Figure 5, which is the item "Per Cent of Surgery Performed at Office -- Urban General Practice". Here, two standard deviations are not needed to exhaust the range; indeed, something like 40% of all the providers fall at the extreme upper cell of the frequency distribution. (The height of the cell represents the number of providers having values in a range defined by the width of the cell). If one kept backing the system down, to get



some exceptions, one would find oneself questioning practices which are right in the middle of an entirely normal practice pattern, but which are "exceptional" in terms of their location in the upper portion of this distribution. (Obviously, this is not a good item for exception-finding and probably should be dumped from profile runs. All that it tells you is that an urban GP, if he does surgery at all, does it in the office for the most part).

What about other distributions? Well, it's clear that each of the practice items used on the profiles is going to tend to have its own distribution -- those for hospitals, interestingly, tend to be closer to normal than those for physicians. But if one could approximate them all with some well-defined distribution other than the normal one, there could be a way found of controlling exception volume, if not with exquisite fineness, at least with more accuracy than can be achieved by letting the system run on at the 2 standard deviation limit derived from the assumption that the distributions on the items are normal.

Such an approximation for a number of items (not all) - can be obtained by looking at them as exponential, rather than normal, curves. Figure 6 shows a chart for finding the percentages (here expressed as probabilities) of the total distribution that are found in the upper



tail of exponential distributions. For example, if one wants no more than 2.2% (0.022) of the providers to except on each item, one should set the exception control limit at 3.8 times the mean. (This can, of course, easily be translated into a number of standard deviations for limit setting on the S/UR system.)

As an example of the results that can be obtained, a test was made using exception control limits set on the assumption that the physician practice items being analyzed were exponential. The actual number of exceptions that would have been produced was weighed against the number predicted on the assumption that the distribution of (1) strictly normal or (2) strictly exponential form. Using the 2 standard deviation limit (on the assumption that the curve was normal) 74.6% more exceptions than predicted were obtained. Using the assumption that the curves were exponential, only 10.55% more exceptions than predicted were obtained.

The conclusion, briefly stated, is that for physician practice items, finer control of exception volume can be obtained by using limits set on the assumption that the curves involved are exponential, rather than the assumption that the curves are normal.

Of course, the ideal case is the one in which a frequency distribution on every curve is available. One

can then see exactly where the limits ought to be set to give exact exception volume control. The problem with this is that without system changes, producing the frequency distribution involves as much computer run time as producing the profiles themselves. Thus, one is gaining nothing in efficiency, and is approximately doubling run costs in order to reduce paper volume. The method suggested here, while inexact, is an improvement over the usual methods now employed.

It should be noted that what I have presented here is only a stopgap -- one possibility is that a better approximation yet can be found by going on the assumption that the distributions involved are of a type called Poisson distributions; using calculus to find the exact areas under curves derived from the histograms shown, using weighting and ranking methods, and so on, are others. Any useful new result obtained will be communicated to the States in some form; and one hopes that States which have made some progress in this area will communicate their results to the Institute for Medicaid Management so that wide dissemination will be possible.

Figure 1

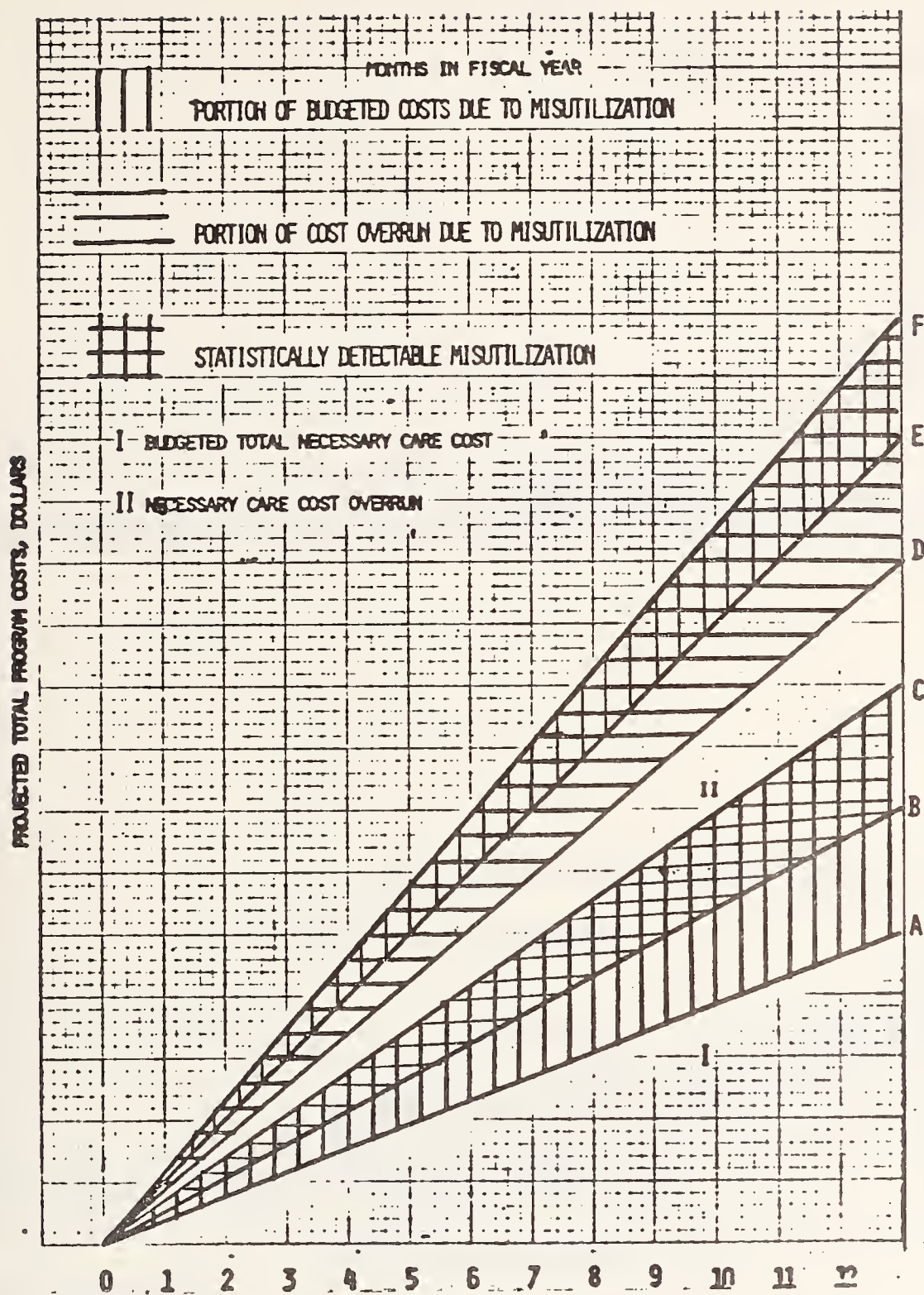


Figure 2

WEIGHTS OF DUC STAFF:

1.	158
2.	158
3.	157
4.	89
5.	189
6.	104
7.	162
8.	155
	<hr/>
	1172 lbs.

$$1172/8 = 146.5 \text{ lbs.}$$

SUMMED DEVIATIONS FROM MEAN:

11.5
11.5
10.5
-57.5
42.5
-42.5
15.5
8.5
<hr/>
0.0

SUMMED SQUARED DEVIATIONS FROM MEAN:

132.25
132.25
110.25
3306.25
1806.25
1806.25
240.25
72.25
<hr/>
7607.00

STANDARD DEVIATION:

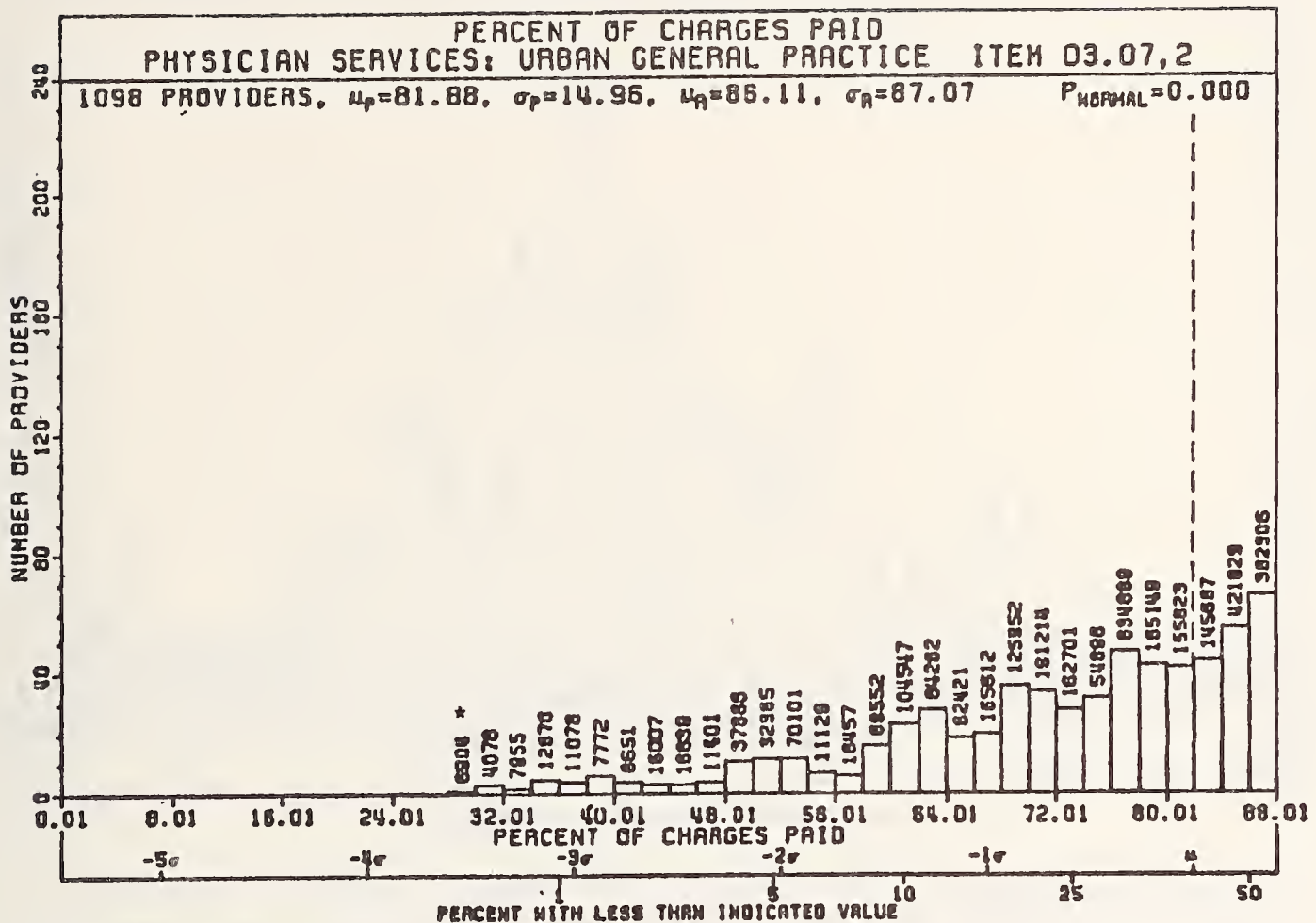
$$\sqrt{7606/8} = 30.83$$

$$\pm 2 \text{ s.d.} = 208.16; 84.84$$

100% of values within  $\pm 2$  s.d.



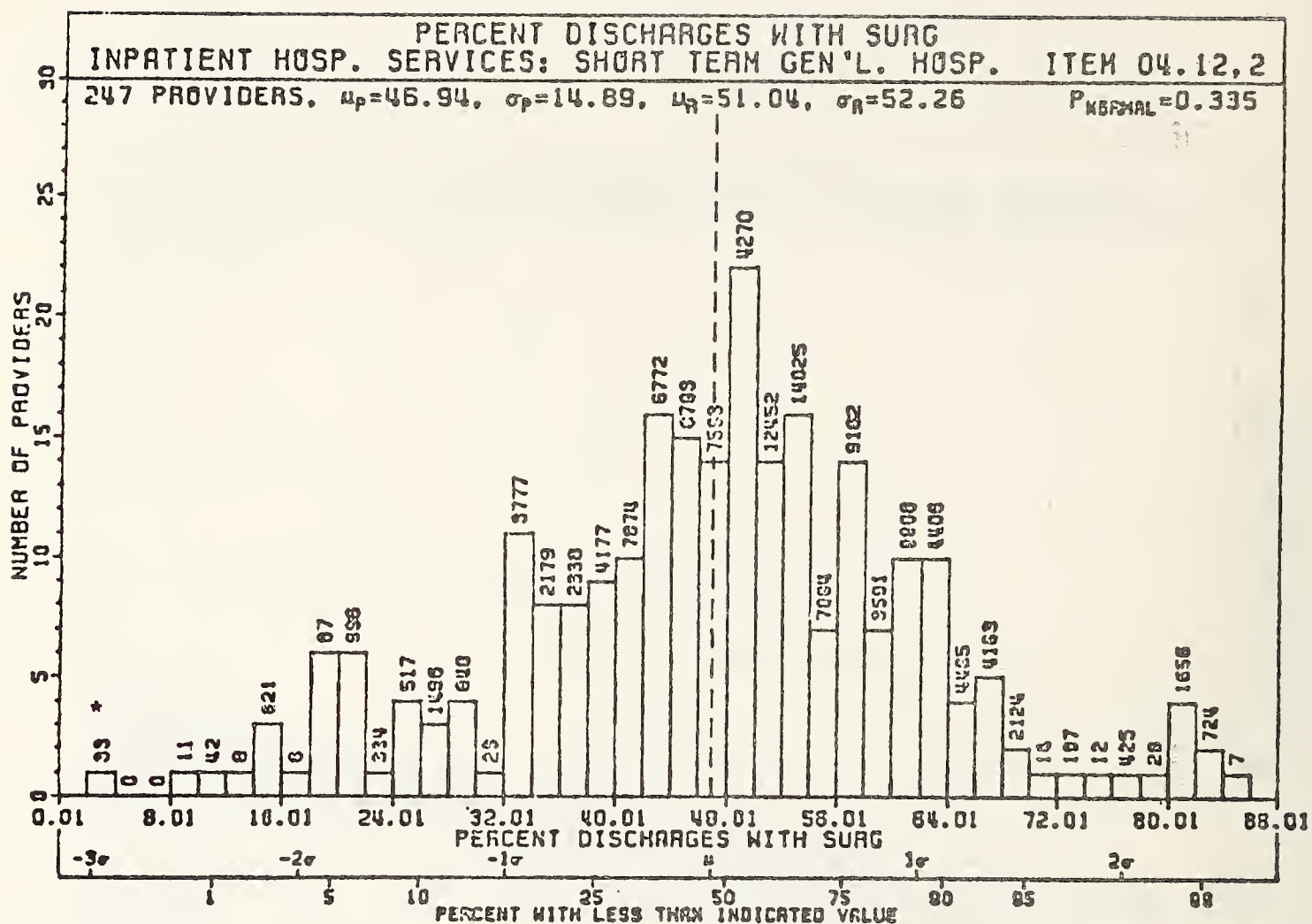
Figure 3



\*TOTAL AMOUNT INVOICED

TOTAL PAYMENTS DIVIDED BY TOTAL AMOUNT INVOICED. INCLUDES CROSSOVER CLAIMS.

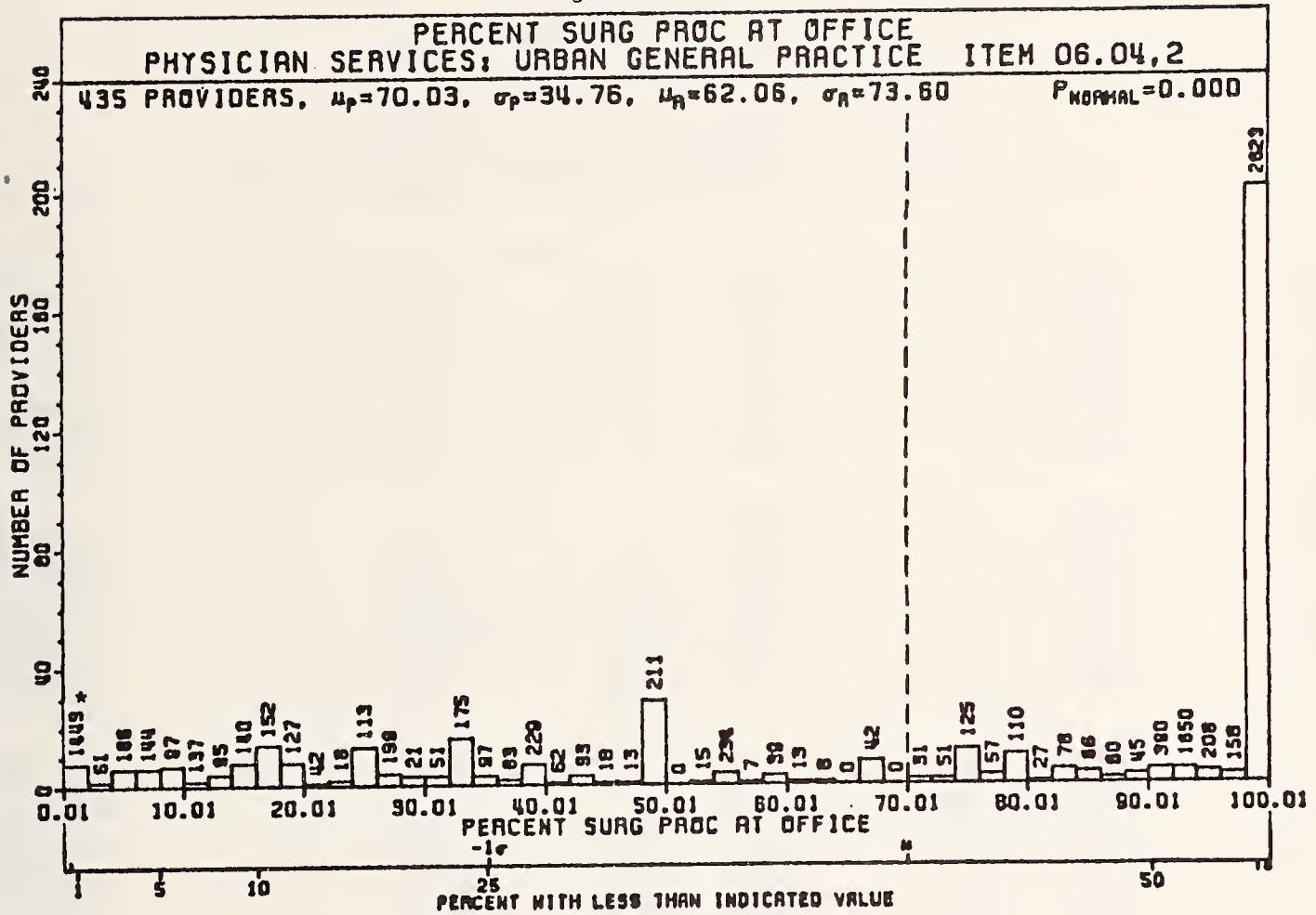
Figure 4



\* TOTAL NUMBER OF DISCHARGES.

NUMBER OF RECIPIENTS DISCHARGED AFTER SURGERY DIVIDED BY TOTAL NUMBER OF DISCHARGES.

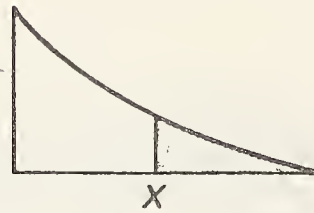
- Figure 5



\* TOTAL NUMBER OF PROCEDURES PERFORMED WITHIN 10000-69999 RANGE.  
 SURGICAL PROCEDURES ARE DEFINED IN TERMS OF CPT CODE RANGE 10000-69999.

Figure 6

TABLE A-3 Probabilities in Right Tail of Exponential Probability Distribution



$\frac{X}{\mu}$	Prob.	$\frac{X}{\mu}$	Prob.	$\frac{X}{\mu}$	Prob.	$\frac{X}{\mu}$	Prob.
0.0	1.000	2.5	0.082	5.0	0.0067	7.5	0.00055
0.1	0.905	2.6	0.074	5.1	0.0061	7.6	0.00050
0.2	0.819	2.7	0.067	5.2	0.0055	7.7	0.00045
0.3	0.741	2.8	0.061	5.3	0.0050	7.8	0.00041
0.4	0.670	2.9	0.055	5.4	0.0045	7.9	0.00037
0.5	0.607	3.0	0.050	5.5	0.0041	8.0	0.00034
0.6	0.549	3.1	0.045	5.6	0.0037	8.1	0.00030
0.7	0.497	3.2	0.041	5.7	0.0033	8.2	0.00028
0.8	0.449	3.3	0.037	5.8	0.0030	8.3	0.00025
0.9	0.407	3.4	0.033	5.9	0.0027	8.4	0.00022
1.0	0.368	3.5	0.030	6.0	0.0025	8.5	0.00020
1.1	0.333	3.6	0.027	6.1	0.0022	8.6	0.00018
1.2	0.301	3.7	0.025	6.2	0.0020	8.7	0.00017
1.3	0.273	3.8	0.022	6.3	0.0018	8.8	0.00015
1.4	0.247	3.9	0.020	6.4	0.0017	8.9	0.00014
1.5	0.223	4.0	0.018	6.5	0.0015	9.0	0.00012
1.6	0.202	4.1	0.017	6.6	0.0014	9.1	0.00011
1.7	0.183	4.2	0.015	6.7	0.0012	9.2	0.00010
1.8	0.165	4.3	0.014	6.8	0.0011	9.3	0.00009
1.9	0.150	4.4	0.012	6.9	0.0010	9.4	0.00008
2.0	0.135	4.5	0.011	7.0	0.0009	9.5	0.00008
2.1	0.122	4.6	0.010	7.1	0.0008	9.6	0.00007
2.2	0.111	4.7	0.009	7.2	0.0007	9.7	0.00006
2.3	0.100	4.8	0.008	7.3	0.0007	9.8	0.00006
2.4	0.091	4.9	0.007	7.4	0.0006	9.9	0.00005

*Illustration:* If  $\mu = 600$ , the probability of exceeding  $X = 900$  is .223.



PRESENTING THE S/UR STORY TO  
PROVIDERS AND OTHER INTERESTED PARTIES

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Minnesota Dept. of Public Welfare

The State of Minnesota Medicaid Surveillance and Utilization Review Division has been in operation for approximately two years. Initial patient and provider profiles were produced through the MMIS in September, 1975, and are currently being run on a quarterly basis. The Division has made great strides in these two years with many systems modifications, several staff additions, and several successful provider prosecutions. I believe we have demonstrated that an effective S/UR program can be operated in a medium size State with a small multidisciplinary staff of professional people. The Minnesota program is currently operating with sixteen people, three of whom are clerical, to review about 13,000 providers and 200,000 recipients' utilization patterns.

It became apparent very early in our operation that various provider groups were interested in the anti-fraud and abuse activities that were going on at the State level. Concern was expressed that the Medicaid program would be sending in policemen to randomly selected providers, demanding to see confidential medical records, and interpreting these records using unqualified personnel. Concern was also expressed that a single honest mistake by a provider might result in an interpretation that this activity was more than an isolated incident and would even warrant prosecution.

In order to allay these fears and to emphasize the capability of the S/UR Division, Minnesota decided to embark on a "road show" to various provider organizations. Initially, a number of practitioners from the various professions were invited to visit the S/UR office and were shown the organization charts and the actual computer generated reports for their particular areas. These informal meetings resulted in absolute disbelief by these providers that all of this information about his or her practice could be generated by the computer from the invoices that he sent into the system. The word of the S/UR capability spread rapidly among the professional organizations and the successful prosecutions of several providers aroused more interest. Inquiries came in from various groups as to whether someone could explain the activities of the Surveillance Division at their future meetings. Thus, we were off and running with our "show and tell" campaign, realizing that this could be one of the most effective fraud and abuse deterrents that a State S/UR operation could use.

In addition to this hoped-for deterrent effect, we were convinced that this program could assist our overall effort in other ways. First, we could open up communications with various provider organizations. Sooner or later we would be working with them or their

membership in various situations that would arise. We wanted their cooperation and felt that taking the mystery out of our operation would create a much better atmosphere for communicating with individual members. Second, we felt that we could share the management summary reports coming out of the system with these groups in order to show statistical information about their profession's practice in the State Medicaid program. Thus, one unit of the State program was actually offering to return information to the providers instead of making the usual requests for more work and information from these people. Third, provider groups could be told about the qualifications of our investigators and the method of selecting providers for on-site visits. Providers were impressed that each field audit team would contain at least one health professional as well as a professional investigator. A question frequently asked our investigators upon entering a facility is, "What are your backgrounds and are you qualified to interpret a patient's medical chart?" Finally, we wanted to impress upon providers the fact that it would be very difficult for them to take advantage of the system with the extensive capability that we had for monitoring them. We wanted to emphasize the flexibility of the MMIS reports and leave them with the correct impression that there was virtually no end to the areas of their practices



that we could evaluate through either their invoices and our computer or an on-site audit by professional personnel.

We selected pharmacy and medicine as our two major areas for the initial programs. Pharmacy was selected because we had obtained convictions of three pharmacy providers in the past year and the profession was becoming alarmed to the point that they believed only pharmacists were being audited by the division. Medicine was selected because of some concern by physicians over our on-site audit procedures, as well as our desire to impress upon them our ability to monitor their practices. We contacted both association executive secretaries and were placed on the agenda of one of their future meetings. A slide show was then developed for each professional group to show the capability of the S/UR subsystem.

The presentations we have used begins with a brief history of the S/UR Division including an explanation of the organization of the unit and how it fits into the overall Medicaid program. Emphasis is made on the fact that we have two basic units, provider and recipient, along with three support units. The qualifications of the personnel are discussed and the team field audit concept is explained. We emphasize that our cases selected for field audits come from many sources, including the computer exception reports and profiles, complaints

from other practitioners, county welfare departments, provider organizations, recipient complaints through EOMB's, and other miscellaneous sources. We also mention that large volume providers are probably more likely to be selected and that we also select providers on a geographical basis to give our activity statewide visibility. Finally, we discuss our statutory authority to look at records and the requirement that the recipient sign a consent form in order to be eligible for the Medical Assistance Program.

We then move on to actual computer activities and reports beginning with a copy of our breakdown of recipients into class groups. We usually start with recipient profiles, as the provider group frequently believes that we investigate and prosecute only vendors, and not the Medicaid recipients. A frequent response from physician groups is that the S/UR Division would be much farther ahead controlling the emergency room abusers than wasting it's time on the small number of providers abusing the system. An example of an actual recipient exception report is first shown followed by a page from the recipient's profile indicating the detail of the overutilization. We then give a brief explanation of our recipient restriction or lock in project and the fact that we are occasionally even attempting to recover money from overutilizing recipients.

We then show all of the various provider types on

which we generate exception reports. This list demonstrates that no medical vendor is exempt from scrutiny by the Medicaid surveillance program. We follow this with a breakdown of physicians by type of practice showing that we attempt to compare like with like. Next, we quickly show some of the management information we obtain about the profession's activities. These reports begin with provider class profiles showing the totals section including all of the report items that can be measured and excepted on for that provider type. We then show one page of averages and standard deviations, exception control limits, frequency distributions, and exception summaries. Experience has shown that it is best to go through these sections rapidly as they are difficult to understand and even more difficult to explain to providers who are seeing them for the first time.

The next report that is shown is an individual provider profile or exception report. Here, a provider whose practice is substantially different from his peers is usually selected, in order to give a more dramatic example and to be more easily explained to the group. In the physician area the most often used provider example is a metropolitan area general practitioner who excepts out for total dollars paid and total number of



recipients seen in one day along with various other unusual, non-excepting report items. It is noted that the physician is earning well over \$100,000 from the Medicaid system and that he would therefore be a likely candidate for an on site audit based on volume alone. The difficulty of knowing where to start on an audit of such an identified practitioner is next discussed.

The treatment analysis exception report section for this physician is then shown to identify his areas of unusual diagnosis and treatment. The physician in this example sees an inordinate number of patients with neck injuries in the younger age groups. The summary section of treatment analysis is then shown for this diagnosis and it is demonstrated that this physician has seen the majority of patients with this diagnosis in the entire state Medicaid program. The exception section is shown once again and the procedures done for the patients with the neck injury diagnosis are examined. The providers are shown that in addition to the standard office call procedure codes for a diagnosis such as this, the physician has also even billed for pap smears and other unlikely procedures. A sample of the physician's provider detail is then shown showing how a sample of recipients with neck injuries can be easily selected and a field audit done specifically looking for the exceptional diagnosis. The providers are told that even though



our audits are termed routine, we usually have very carefully selected our sample of recipients before an on-site visit is scheduled. We also note that we can order recipient profiles on the patients selected for audit in order to obtain a complete history of previous diagnoses and treatments by other practitioners. With this last observation the presentation is concluded with an opportunity for questions from the group.

The results from these presentations have been gratifying. Not only have the associations invited us to present our story but the state licensing boards have also extended an invitation to us for the same presentation. We have been assured by the Attorney General's Office in Minnesota that we can share provider information with licensing boards as long as we are jointly involved in working on the cases for which they have requested information. The state licensing boards have now become excellent sources for cases as they have never had the type of information that we can provide available to them before. These agencies, unlike state provider associations, have the power to suspend or revoke professional licenses and can be of great assistance where criminal or civil action is impossible. The State Pharmaceutical Association has invited the Division to conduct a workshop at its annual meeting. Continuing education credits for pharmacist's license renewal has

been granted by the State Board of Pharmacy for that presentation.

Our efforts to communicate our capabilities to provider groups have not been limited only to formal presentations. Minnesota S/UR also has given seminars to health professional students at the University of Minnesota, written journal articles for various health professional publications, and even had a part in a colored video tape shown to provider groups throughout the state by one of the Invoice Processing Division's provider trainers. As previously mentioned we are pleased with our results, and we from Minnesota would urge you to consider such a program in your states.

MEDICAID PROGRAM STAFFING PROBLEMS  
AND REQUIREMENTS

Thomas Gaylord  
Director, S/UR  
Minnesota Department of Public Welfare

Now that a decision has been made either by or for you to develop patient and provider profile capability in your states, you will soon be faced with the problem of what you are going to do with the reports once they are produced. What numbers and types of personnel will be necessary to order, produce, and analyze your profiles? Finally, how should a Surveillance and Utilization Review division be organized and where should it fit into the overall Medicaid picture in your State? Let me give you an example of one State's thinking and ideas in this area and see if this might possibly work for you.

Minnesota is not one of the largest Medicaid programs, but not one of the smallest either. We have two major metropolitan areas -- Minneapolis-St. Paul and Duluth -- and the remainder of the State is rural. The State's area is large -- approximately 500 miles by 300 miles, and has a population of slightly under 4 million people. We have 220,000 eligible recipients and 14,000 providers covering all health care services. We process approximately 450,000 claims per month "in house" and have annual expenditures of \$350,000,000.

With these basic facts in mind see if the following package would be appealing to you:

- A separate division of the State Medicaid Program for just S/UR



- Equal status in the Medicaid organization with a Medicaid Policy Division and an Invoice Processing Division.
- A maximum complement of only 24 staff people.
- Complete in-house capability for identification, analysis, and investigation of Medicaid fraud cases from initial complaint to presentation to Attorney General for prosecution.
- Working relationships with State licensing boards, health professional associations, and PSRO's.

Would you be interested? This is in fact what is currently taking place in Minnesota.

When I arrived at the State to begin the task of developing an operational S/UR unit, the only activity that had taken place in this area was the introduction of the Ohio S/UR subsystem into the Minnesota mechanized claims payment system. There were two social workers and one mathematics and statistics person on the staff. The emphasis had been to develop the centralized disbursement system first and be concerned about the post-payment review aspects of the program later. This proved to be a serious error as priorities for program changes and other modifications were already established with S/UR requests at the bottom. Any State planning to implement an MMIS systems should hire its key S/UR staff people (perhaps only 1 or 2) as early as possible in the

process long before any actual profiles are produced. We are still continuing to eliminate small wrinkles in our reports two years after the initial runs due to this lack of strong S/UR voice in the early planning and implementation of the system.

It also became evident early in our history at Minnesota that it was essential to have good user documentation and dedicated State personnel to work with your contractor to set the system up. The Ohio model system has very complex and sophisticated programs and is not rapidly learned by new programmers and management analysts. The system is designed to be modified on a regular basis as user needs vary and requires extensive knowledge on the part of your systems people to make these modifications and use the subsystem to its full capacity.

My first idea of how to approach future staffing was to do a literature search of S/UR activities in other States or at the Federal level. As others of you have probably found there was a complete void of published information in this area. The next best step seemed to be a look at what other States were actually doing in the area.

Here it became obvious that there were two extremes of activity occurring in the various other programs.

First was the "fraud squad" or policeman approach which seemed to be most applicable to the larger population centers. The opposite extreme was the total professional peer review approach where virtually no thought was given to criminal fraud convictions or recoveries. This approach did not seem to have adequate separation from the involved provider and was more like the "fox watching the chicken coop". Thus a decision was made to try a combination of the two extremes in Minnesota.

As the S/UR profiles continued to come on a quarterly basis it became fairly obvious that a logical approach to workload division would be Recipient and Provider S/UR units. As we already had two social workers on the staff and we planned our corrective action for recipient overutilizers at the county level, we began our initial unit in this area. The staff was familiar with the S/UR profiles and we could verify their accuracy more rapidly than with provider profiles. A pilot restriction program for overutilizing recipients was quickly initiated and we were off and running.

The other logical case area was Provider S/UR. We decided to staff this unit with both health professionals and auditors with specialization by each member of the unit. The supervisor is an occupational therapist

with a public health background and two registered nurses and a medical technologist were later hired. I added additional depth to that unit with my pharmacy background and we also drew from vision care, dental, pharmacy, and medical consultants in another division of the Medicaid program. Thus this became virtually a self contained unit able to make rather sophisticated judgements about appropriateness and quality of care in a variety of health care disciplines.

Finally, we developed three support units to assist the two primary Recipient and Provider units. The first of these was the Investigative Unit consisting of our two professional policemen and the second was our Data Analysis Unit which acted as the in-house computer experts and provided liaison with our systems people. Lastly we added the Utilization Control Unit which carries out the monitoring of the inpatient hospitals, PSRQ's, and long term care facilities. The Minnesota Surveillance and Utilization Review Division is thus organized.

As you can see, Minnesota has developed a multidisciplinary group of professional people. We currently have 16 people, all of whom have college degrees or professional licensure. The only exception to this are our three clerical staff. Cases come in, are distributed to either the Recipient or Provider units, are initially analyzed and assigned to a staff member for



necessary further action. Additional information or reports are ordered from the Data Analysis and Control Unit and field investigations are planned in cooperation with the Investigative Unit. Field audits are always done with at least one health professional and most likely one investigator. This is much more acceptable to providers who frequently ask about the qualifications of the investigators to read the patients' medical records. It also has enabled us to have a certain amount of continuity as the health professional analyzing the case is able to follow it from desk audit through field audit all the way to prosecution if need be. Finally, I have found this team approach to be excellent for staff morale as each investigator, whether health professional or professional investigator, knows that he will be able to follow his case from start to finish without losing the credit for all of his early in-house "pit work".

We feel we have been fairly successful with our approach in Minnesota. Despite a lack of heavy provider emphasis early in our history the State has been successful in obtaining six provider convictions in the last two years resulting in repayments, fines, and jail terms. In addition we have recovered substantial amounts of money and closed many loop-holes through administrative procedures.

There cannot be too much emphasis put on the hiring of quality personnel. For example, there are auditors and there are investigative auditors. In an S/UR operation it is essential to obtain people who have the ability to become detectives despite their training in other fields. We use our investigative unit to attempt to train our health professionals and other personnel in this area. It is very easy to overlook something in a particular practice that is quite obvious because of looking too deeply into the technical aspects of the case.

We have found that virtually any type of health professional can be a valuable resource for a S/UR unit. Pharmacists and nurses are familiar with many varied aspects of health care, are not impossible to afford, and can communicate very comfortably with physicians and in hospital settings. Our medical technologist has proved to be invaluable in interpreting appropriateness of laboratory procedures based on diagnosis and detecting fee splitting in these areas. She also has been able to visit laboratories and almost immediately determine the capability of that facility to perform the billed procedures. Our professional investigators have had to learn Medicaid policy backward and forward and were selected on their ability to communicate well

with all types of providers as well as their investigative expertise.

Finally, the director must be an individual with credibility who can effectively work with other Medicaid directors, the State legislature, health care professionals, attorneys, and county social service departments. This individual must be forceful and yet be able to intervene diplomatically in an ongoing series of daily crises.

We in Minnesota feel we have had successes with our system and we like to tell our story. However, we don't have all the answers anymore than anyone else does. If we did we would not be in attendance at conferences such as this one.

A STATE REVAMPS S/UR  
"S/UR II"

A SECOND GENERATION S/UR  
DESIGNED BY PROFESSIONAL HEALTH  
RESEARCH FOR THE STATE OF MAINE

Priscilla Carney, Director  
Medicaid Surveillance  
State of Maine

Susan Fox, Director  
Utilization Review Systems  
Professional Health Research



We would like to thank the State of Maine for giving us the opportunity to produce a second generation S/UR and also thank the State of Arkansas Utilization Review Division who gave us the insights into user needs which prompted us to undertake the new design. S/UR II benefited from its predecessor model and from the expression of users' needs as they gained experience with the first system.

This presentation will focus on one of the purposes of the S/UR system: to detect Medicaid program MISUTILIZATION.

The first experience of most states with S/UR reports was indicative of the "management misinformation syndrome". Most states suffered through the necessary, initial S/UR shake down process characterized by some of the following complaints:

- too much paper
- too much data
- difficulty in validating report content
- delay in program changes to correct or modify reports

With experience, some states have overcome some of the above problems; the second generation S/UR is designed to accomodate the user in all of the above. Misinformation cannot help you achieve your purpose

in controlling Medicaid program misutilization. You need a microscope you yourself can focus -- not one that requires an engineer to intervene every time you want to change the focus or change a slide.

You want a system that can help you in your decision making process. The new S/UR design evolved out of this expression of user needs.

S/UR should be seen as a user's system, par excellence - not a technician's dream (or nightmare, as the case may be); not some remote number crunching machine. If you need to examine specific medical procedures, in light of specific diagnoses, for patients of a specified age, by providers of a specified type -- all criteria should be manipulated by the user, directly. You should be able to call for and change all report contents, down to the specific medical codes, beneficiary ages, etc.

We can depict the new S/UR system as a series of user determinations all geared toward achieving the general purpose of detecting Medicaid program misutilization through new system flexibility.

The slides will illustrate key system features.

We can depict the S/UR system as a series of user decisions aimed at detecting Medicaid program misutilization.

#### DECIDE CLASS GROUPS

- Use all appropriate selection criteria
- Focus on selected classes
- Validate class group members

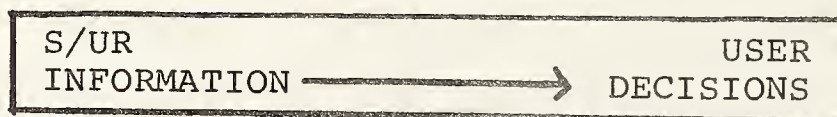
#### DECIDE DATA ELEMENTS TO BE COLLECTED

- Select data to use
- Select and validate all data elements
- Decide what elements to combine
- Include data from different claim types
- Determine how to compile data

#### DECIDE CONTENT OF EXCEPTION REPORT

- Data manipulation specifications
- Type of processing (include referral processing)
- Procedure/Diagnosis/Rx frequency report
- Exception patterns (how to weight exceptions)

The S/UR system should facilitate users in achieving objectives. S/UR reports should support user decisions in Medicaid misutilization control program.



- DATA DEPENDENT SYSTEM
- FLEXIBILITY USER CONTROL
- EXPANDED REPORTING CAPABILITY
- REPORTING REFINEMENTS
- FOCUSING CAPABILITY
- EFFICIENT RESEARCH



# Comparison New Generation PHR-S/UR Subsystem and First Generation S/URs

## First Generation S/UR-- (Ohio - New Hampshire models)

Enhanced S/URs design  
maintains all federal  
specifications and in  
addition:

- Twenty-two separate processing programs for recipient and provider exception reports
- Most of the 22 require significant state modification
- Transfer from one machine to another (IBM to Honeywell and even IBM to IBM) requires significant work
- All user specific codes are hard coded and embedded in programs; program maintenance requirements are extensive if user requests changes
- Standard Deviation as used often produces too many false leads
- Frequency Distribution (one option)
- Totals, Avg & S.D., upper and lower limits, number and percent excepted all displayed on separate reports
- Multiple internal claim records (almost one per type of claim per state)
- Number of providers counting in an "average" unknown
- Treatment Analysis reporting-limited to a fixed format

- Eleven programs processing provider, recipient and treatment analysis reports

Only the interface programs (2) identifying state specific claims data need modification

- Easily modifiable to different hardware configurations reducing installation difficulties to a minimum
- Programs are transparent; all codes and criteria are on control file; no hard coding program maintenance required for changes
- Provider weighting factor and line item weighting added to reduce false exceptions
- 3 options--new ones use standard deviation + graph
- All data merged under single line item in one report for user convenience
- One, universal internal claim record
- Number of providers is displayed
- TA expanded: same versatility as Provider reports

## CLASS GROUPING

- All class grouping works off Provider Master File rather than incoming claims
- User has access to provider class grouping regardless of claims submitted
- User can select among several criteria for provider class grouping including:
  - Provider Type                      e.g., MD, Inpatient, Ambulance, Long-Term Care, Optometric
  - Type Practice                      e.g., Group, Solo, Clinic
  - Geographic Location              e.g., PSRO, Urban, Rural, County
  - Specialty                          e.g., Internist, Surgeon
  - Facility Bed Size                  e.g., 0-99, 100-200
  - Facility Type                      e.g., Teaching, Non-Teaching

Any criteria available on the Provider Master File can be used as class grouping criteria. The system will allow combination of criteria for class grouping.

- Recipient Class Grouping is also user determined and accomplished through an interface with the Beneficiary Master File.
- Grouping criteria could include:
  - Age
  - Aid Category
  - Geographic Location
  - Sex

SYSTEM  
PROGRAM=11

MEDICAL AUST (CONTROL) SYSTEM  
INVENTORY SELECTION FOR CLASS/CLUP FILE  
CATEGORY OF SERVICE = 01 CLASS/GROUP = 02

PAGE 2  
DATE 04/08/77

PROVIDER ID	PROVIDER TYPE	MED. CONTROL	TYPE PRACTICE	SIZE	AREA CODE	COUNTY	SPECIALTIES
01	01	0	00	20	04	001	00 00 00
01	01	0	00	57	04	003	00 00 00
01	01	0	03	52	04	003	00 00 00
01	01	0	00	73	04	004	00 00 00
01	01	0	00	23	04	004	00 00 00
01	01	0	00	55	04	004	00 00 00
01	01	0	00	70	05	006	00 00 00
01	01	0	00	14	05	007	00 00 00
01	01	0	00	28	05	008	00 00 00
01	01	0	08	29	04	009	00 00 00
01	01	0	00	22	04	009	00 00 00
01	01	0	00	66	04	010	00 00 00
01	01	0	00	30	04	010	00 00 00
01	01	0	00	30	05	012	00 00 00
01	01	0	00	42	05	013	00 00 00
01	01	0	00	48	04	014	00 00 00
01	01	0	03	49	02	015	00 00 00
01	01	0	00	36	05	017	00 00 00
01	01	0	00	46	05	017	00 00 00
01	01	0	00	51	05	019	00 00 00
01	01	0	00	34	05	020	00 00 00
01	01	0	00	34	05	021	00 00 00
01	01	0	04	50	05	022	00 00 00
01	01	0	00	49	05	024	00 00 00
01	01	0	00	19	05	025	00 00 00
01	01	0	00	70	05	026	00 00 00
01	01	0	00	21	05	029	00 00 00
01	01	0	00	77	05	030	00 00 00
01	01	0	00	67	05	031	00 00 00
01	01	0	00	55	04	032	00 00 00
01	01	0	00	45	04	034	00 00 00
01	01	0	00	45	05	034	00 00 00
01	01	0	00	28	05	038	00 00 00
01	01	0	00	42	05	041	00 00 00
01	01	0	00	34	05	042	00 00 00
01	01	0	03	40	05	045	00 00 00
01	01	0	00	40	05	045	00 00 00
01	01	0	00	53	05	047	00 00 00
01	01	0	00	40	05	047	00 00 00
01	01	0	00	40	05	048	00 00 00

## CONTROL FILE

The Control File is the key to the new SURS processing and is entirely user controlled. The Control File allows the user:

- Run to run matrix line item changes without program change
- Run to run report item change without hard coding
- Run to run alteration of report periods without hard coding
- Run to run alteration of class group parameters without hard coding

The Control File:

- Contains and directs raw data collection and manipulation to produce provider, recipient, and TA profiles.
- Accommodates any procedure coding scheme (e.g. CPT, RVS)
- Allows user specification of procedure codes or range of codes, including modifiers
- Accommodates any diagnosis coding scheme up to five digits (ICDA, HICDA)
- Allows specification of diagnosis and diagnoses groups that can be related to procedures as well as to providers and recipients
- Allows specification of line item level data collection and reporting, e.g. on inpatient claims
- Directs referral processing which allows information from multiple claim sources to be integrated into reports
- Defines exception reporting criteria
- Allows users to define, control, and monitor claims extraction for processing
- Determines type of processing to be done
- Integrates many functions of original treatment analysis



SYLLIUS  
PROGRAM-1C

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PROVIDER CATEGORY OF SERVICE IS PHYSICIAN

INDEX SUMMARY TITLE		DATA - RANGES AND MATCH FIELDS	
NUM	W/F	INCL	INDEX SUMMARY TITLE
160		ALP	TUT LAB AND MAY THIS D01
161		ALP	TOTAL PAYMENTS CFF VSIS
162		NUM	MC UNDP CLIENTS W PAID-1 L
163		ALC	TUT LAB CHG-HOSP
164		ALC	TCT RAD CHARGES-HOSP
165		ALC	TCT PHARMACY CHGS-HOSP
167		ALC	TCT SURGICAL PROCEDURE-HOSP
168		ALC	TCT HOSP ANCELL CHGS-SURG USCH
169		NUM	MC CLTS W 4 DR MURK PRE DP DAY
170		ALC	NO QUALIFY CIRCUMSTANCES-ANTS
171		ALP	TCT PMS QUALIFY CIRCUM-ANESTH
172		ALU	MU SPEC THERAP PRUC - ANESTH
173		ALP	TOT PMS SPEC THERAP PRUC
174		NUM	TCT UNDP CLIENTS AGE 0-18
175		NUM	TCT UNDP CLIENTS AGE 19-45
176		NUM	TCT UNDP CLIENTS AGE 46-64
177		NUM	TOT UNDP CLIENTS AGE 65+

Specify data to be collected & how it is counted.  
e.g. R.L.U.N. = 'Count all unduplicated Recipients'

Age Specification

Procedure Codes & Indicators

'Days Stay' Specification

Line Item Specification

Diagnosis-Procedure-Specs

## REFERRAL PROCESSING

- Any claim carrying a referring provider I.D. number
- All data available on "referred to" provider claim is reportable

Referring Provider Class Group	Referred to Provider and Data
M.D.	Hospital <ul style="list-style-type: none"> <li>● Length of Stay</li> <li>● Ancillary Charges</li> <li>● Discharge Diagnosis</li> <li>● Level of Care</li> </ul>
M.D. - G.P. EPSDT clinic	M.D. - Specialist <ul style="list-style-type: none"> <li>● Procedures</li> <li>● Diagnoses</li> <li>● Charges</li> </ul>
M.D.	Pharmacy <ul style="list-style-type: none"> <li>● Drug usage</li> <li>● Generic</li> <li>● Trade name</li> </ul>
M.D.	Indep. Lab/X-Ray

SYSTEM LABS  
PROGRAM-11

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PROVIDER CATEGORY OF SERVICE II PHYSICIAN									
DATA - RANGES AND MATCH FIELDS									
NUM	P/F	INCL	INCL SUMMARY FILE	DATA - RANGES AND MATCH FIELDS	DIAG-CP	01	CPT CODES	70002-09399	
100	ALP	TU1	LAB AND RAY PMIS D101						
101	ALP	TOTAL PAYMENTS CPT VSIS							
102	RIUN	NO UNOUP CLIENTS M PATIENT L							
103	ALC	TOT LAB CHG-HOSP							
104	ALC	TOT RAD CHARGES-HOSP							
105	ALC	TOT PHARMACY CHGS-HOSP							
107	ALC	TOT SURG CAL PROCEDURE S-HOSP							
108	ALC	TOT HOSP ANCLL CHGS-SURG DISCH							
109	RIUM	NO CLYS M 4 OR MORE PRE OP DAY							
110	CIAO	NO QUALIFY CIRCUMSTANCES							
191	ALP	TOT PMIS QUALIFY CIRCUM-ANESTH							
192	ALU	NU SPEC THERAP PROC - ANESTH							
193	ALP	TOT PMIS SPEC THERAP PROC							
194	RIUM	TOT UNOUP CLIENTS AGE 0-18							
195	RIUM	TOT UNOUP CLIENTS AGE 19-45							
196	RIUM	TOT UNOUP CLIENTS AGE 46-64							
197	RIUM	TOT UNOUP CLIENTS AGE 65+							

Specifies category of service to be brought into physician report for referral processing e.g. C/S 14-14 = Independent LAB C/S 01-01 = Inpatient Hosp

Indicates referral claims being brought in to physician report

## DIAGNOSIS GROUP SPECIFICATIONS

The new SURS allows the user to specify through the control file any diagnosis or group of diagnoses for use in Provider, Recipient and Treatment Analysis reports. This feature allows for diagnosis reporting by provider and recipient related to:

- Surgical procedures
- Lab procedures
- Radiology procedures
- Drug therapy
- Any other codable procedure

In addition, it can also be related to but not limited to:

- Hospital Admissions
- Length-of-Stay
- Hospital Ancillary Charges
- Patient Age
- Patient Sex

An important feature is the ability to group diagnoses that do not fall within a continuous code range.



# DIAGNOSIS GROUPS

TRAN CODE	DIAG GROUP	DIAGNOSIS GROUP TITLE
0G 1 2 3 4	01 5 6	0599.00 0599.01 FROM 10 15 DIAG RANGE 16 11 12 16 ← Chronic Pyelonephritis OTHER Pyelonephritis, Pyelitis, Pyelocystitis
0G 1 2 3 4	01 5 6	0599.50 7 11 12 16 ← Cystitis
0G 1 2 3 4	01 5 6	0599.70 7 11 12 16 ← Urethritis
0G 1 2 3 4	01 5 6	0599.90 7 11 12 16 ← Urinary Tract Infection
0G 1 2 3 4	01 5 6	
0G 1 2 3 4	01 5 6	
0G 1 2 3 4	01 5 6	

\* This creates a group of diagnoses that can be reported on in any report. Diagnosis groups are added or deleted to the system by this transaction. No hard coding is required.

SYSTEM SURV:  
PROGRAM-JL

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PROVIDER CATEGORY OF SERVICE II PHYSICIAN

DATA - RANGES AND MATCH FILLS

NUM P/F INCR INDIK SUMMARY TITLE  
160 AILP TOT LAB AND DRUG PMIS DX01  
161 AILP TOT PMIS OFF VSTS  
162 RIUM NU UNEMP CLIENTS W PAIN-1 L  
163 AILC IUT LAB CHG-MUSP  
164 AILC TOT RAD CHARGES-MOSP  
165 AILC IUT PHARMACY CHGS-MUSP  
167 AIAL TOT SURGT CAL PKCLOURE-MUSP  
168 AILC TOT MUSP ANCLL CHGS-SURG DSCM  
169 RIUM NU CLTS W 4 OR MORE PRE OP DAY  
170 CIAU NU QUALIFY LINCUMSTANCL-ANES  
171 AILP TOT PMIS QUALIFY LINCUM-ANESTH  
172 AILU NO SPEC THRAP PRUC - ANESTH  
173 AILP TOT PMIS SPEC THRAP PRUC  
174 RIUM IUT UNEMP CLIENTS AGE 0-10  
175 RIUM TOT UNEMP CLIENTS AGE 11-45  
176 RIUM TOT UNEMP CLIENTS AGE 46-64  
177 RIUM TOT UNEMP CLIENTS AGE 65-99

DIAG GP 01 CPT CODES 70002-09399

CPT CODES 90000-90099

C/S 14-14 W/C R CPT CODES 60003-69399  
C/S 01-01 W/C R LI CODES L  
C/S 01-01 R/C R LI CODES K  
C/S 01-01 W/C R LI CODES J  
C/S 01-01 W/C M CPT CODES 10000-69999  
C/S 01-01 R/C R LI CODES 6-0  
C/S 01-01 R/C R OTHER SEL 004-999 CPT CODES 10000-69999  
CPT MOD A -A CPT CODES 99100-99135  
CPT MOD A -A CPT CODES 99100-99135  
CPT MOD A -A CPT CODES 96250-96459  
CPT MOD A -A CPT CODES 96250-96499  
AGE 0-10  
AGE 11-45  
AGE 46-64  
AGE 65-999

Example of Diagnosis to  
Procedure Linkage  
GP 01 = CYSTITIS &  
PYELONEPHRITIS

## DRUG GROUPING

- Specific drug information can be included in reporting by Therapeutic Class
- Drug information can also be included in reporting by individual NDC code
- New SURS allows for grouping non-numerically related drug codes
- Generic and trade name drug usage can be compared

NDC DRUG CODE GROUPS

TRAN CODE	DRUG GROUP	DRUG GROUP TITLE	FROM	TO	
XG 1 1 2 3 4	10 5 6	ALL BENZODIAZEPINE PRODUCTS	0000410001	0000410006	44
XG 2 1 2 3 4	10 5 6	- Librium/Valium	0000410001	0000410006	24
XG 2 1 2 3 4	10 5 6	- Libritabs	0000410013	0000410015	24
XG 2 1 2 3 4	10 5 6	- SK-LYGEN (generic chlorazepoxide)	0000710441	0000710443	24
XG 2 1 2 3 4	10 5 6	- SERAX	0000810006		24
XG 2 1 2 3 4	10 5 6	- SEAX	0000810051	0000810052	24
XG 2 1 2 3 4	10 5 6	- TRANXEN	0001413417	0001413419	24



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Date 02/07/77

PROVIDER CATEGORY OF SERVICE 30 PHARMACY  
DATA - RANGES AND MATCH FILLS

LINE	ITEM	DESCRIPTION	UNIT	PRICE	AMOUNT	DATE
016	ALAL	TOI NO GRP 01 RXS-PROPOXYPHEN	URUC	CP 01		
017	ALAL	TOI NO GRP 02 RXS-URAVON ONLY	URUC	CP 02		
018	ALAL	TOI NO GRP 03 RXS-URAVON-N	URUC	CP 03		
019	ALAL	TOI NO GRP 04-CHLORAL HYDRATE	URUC	CP 04		
020	ALAL	TOI NO GRP 05-NOCTEC/SOPHOS	URUC	CP 05		
021	ALAL	TOI NO GRP 06-ALL MEV-UEANATES	URUC	CP 06		
022	ALAL	TOI NO GRP 07-EQUANIL/MILIDON	URUC	CP 07		
023	ALAL	TOI NO GRP 08-ALL AMPICILLINS	URUC	CP 08		
024	ALAL	TOI NO GRP 09-POLYCYCLIN ONLY	URUC	CP 09		
025	ALAL	TOI NO GRP 10-ALL BENZODIAZEPES	URUC	CP 10		
026	ALAL	TOI NO GRP 11-5K-LYGEN RXS	URUC	CP 11		
027	ALAL	TOI AMT PH1 GRP 01-PROPOXYPHEN	URUC	CP 01		

Specifies Drug Grp. Reporting  
Can also specify individual drugs

DIAGNOSIS AND PROCEDURE CODE

FREQUENCY PRINT OUT

- Allows print out by code on exception provider or recipient profile of all procedure codes reported in order of frequency
- Allows print out by code on exception profile of all diagnoses reported in order of frequency
- Allows print out by specified drug groups of all individual drugs reported in order of frequency



**MEDICAL ABUSE CONTROL SYSTEM**

AFIP M  
CLASS GROUP 02 PULASKI-AGE 6-20 AFDC

1940.

CHUYAR	AID	AGE	SEX	RACE	C. C.	M. INS.

ה'תש"ח

三

**TRERO**

[illegible]

## - Radiology Procedures

## Surgical Procedures



## CONTROL FILE REPORT SPECIFICATIONS

The Control File Report Specifications function is to:

- Format the data
- Define line item content
- Define line exception pattern criteria
- Define the data manipulation calculations (totals, ratios, percentage)
- Specify internal exception calculations including standard deviation and/or fixed limits
- Specify frequency distribution
- Suppress, though not necessarily delete, reporting on any line item

## CLASS GROUP MANAGEMENT SUMMARY REPORT

- Displays the class group total, average, standard deviation, upper and lower limits for each line item on single report
- Specified number of providers or recipients used in line item calculations
- Specified % of total who fall beyond upper and lower limits
- Identifies exception pattern for each line item
- Allows user to specify up to five different date ranges

SYSTEM - SURS  
PROGRAM-10

FROM MAY 1976 WEIGHT  
TO JUL 1976A PC/NO

FROM JUL 1976 WEIGHT  
TO DEC 1976A PC/NO

MEDICAID ABUSE CONTROL SYSTEM  
PROVIDER CATEGORY OF SERVICE 30 DENTAL  
CLASS GROUP 01 DENTISTS -URBAN

PAGE 102  
RUN DATE 04/07/77

03 FINANCIAL SUMMARY SECTION				PATTERN 0			
02 AMT PAID MEDICAID	467,243.75	224 C	224 C	638,300.35	232 C	232 C	232 C
TOTAL GP	2,003.90	224 W	224 W	3,030.86	232 W	232 W	232 W
AVERAGE	4,951.20	0.0/	0.0/	0.00	0.0/	0.0/	0.0/
STND DEV	0.00	2.2/	2.2/	14,429.10	2.1/	2.1/	2.1/
LOWER LIM	11,988.30	5	5				
UPPER LIM							
03 FINANCIAL SUMMARY SECTION				PATTERN E			
03 AVG PAYMENT PER CLIENT	97.91	224 C	224 C	93.37	232 C	232 C	232 C
TOTAL GP	97.91	224 W	224 W	90.35	232 W	232 W	232 W
AVERAGE	84.62	0.0/	0.0/	78.49	0.0/	0.0/	0.0/
STND DEV	0.00	0.0/	0.0/	0.00	0.0/	0.0/	0.0/
LOWER LIM	2.5-8.9	2	2	255.33	0.0/	0.0/	0.0/
UPPER LIM							
03 FINANCIAL SUMMARY SECTION				PATTERN 0			
03 PERCENT OF CHARGES PAID	85.57	224 C	224 C	85.05	232 C	232 C	232 C
TOTAL GP	85.57	224 W	224 W	84.01	232 W	232 W	232 W
AVERAGE	13.57	0.0/	0.0/	13.14	0.0/	0.0/	0.0/
STND DEV	58.72	0.0/	0.0/	57.73	0.0/	0.0/	0.0/
LOWER LIM	100.00	0	0	100.00	0	0	0
UPPER LIM							
03 FINANCIAL SUMMARY SECTION				PATTERN 0			
03 TOTAL PAID- CHILDREN	279,089.00	197 C	197 C	389,072.35	206 C	206 C	206 C
TOTAL GP	1,414.69	197 W	197 W	1,880.49	206 W	206 W	206 W
AVERAGE	3,297.03	0.0/	0.0/	0.00	0.0/	0.0/	0.0/
STND DEV	0.00	2.5/	2.5/	9,657.88	3.3/	3.3/	3.3/
LOWER LIM	6,010.75	5	5				
UPPER LIM							
03 FINANCIAL SUMMARY SECTION				PATTERN 0			
03 TOTAL PAID- ADULTS	187,899.75	182 C	182 C	240,792.50	195 C	195 C	195 C
TOTAL GP	1,032.96	182 W	182 W	1,376.81	195 W	195 W	195 W
AVERAGE	2,137.47	0.0/	0.0/	0.00	0.0/	0.0/	0.0/
STND DEV	5,791.90	2.1/	2.1/	6,009.32	2.0/	2.0/	2.0/
LOWER LIM		4	4				
UPPER LIM							
04 SUMMARY OF SERVICES				PATTERN 0			
01 TOT NO SERVICES	24,952.00	224 C	224 C	30,639.00	232 C	232 C	232 C
TOTAL GP	110.94	224 W	224 W	166.54	232 W	232 W	232 W
AVERAGE	209.45	0.0/	0.0/	352.19	0.0/	0.0/	0.0/
STND DEV	0.00	4.4/	4.4/	890.92	2.5/	2.5/	2.5/
LOWER LIM	51.84	10	10				
UPPER LIM							

Specifies No. of providers or recipients  
used in line item calculation  
Indicates actual no. excepting in line item  
Indicates % of total excepting in line item

# CLASS GROUP EXCEPTION PATTERNS

Users can rank and weight line items to produce more accurate provider/recipient exception profiles.

- Exclude certain "information only" lines from exception processing
- Group lines together into exception sets
- Weight lines so that a specified number of line item exceptions are required
- Weight a line to constitute an exception by itself
- Indicate that lower limits should be checked

Line Item	Exception Weighting	
1	Ø	Report only
2	A1	Lines 2, 3, 7 form a set
3	LA1	
4	X	Lower limit checked
5	E2	Maximum weight
6	LE2	Lines 5,6,9 form a set
7	A2	
8	2	This line weighted 20%
9	E2	
10	5	



SYSTEM SURF  
PROG/AM-10

RECEIPT

PAGE 04/13/77

LAST UPDATED 04/11/77 APL (1)

CLASS GROUP 01 POLASKI-ALF C-5 110C

20 21 26 27 31 26 57 41 42 AIR 5 DATES 76-01/76-12 A

01 WALKER EXCEPTION CUMULATIVE

NO REPORT ITEM  
01 TOT AMT PAID  
02 TOT INCOME RECEIVED  
03 TOT INCOME DIAGNOSIS

02 FINANCIAL SUMMARY

NO REPORT ITEM  
01 TOT AMT PAID  
02 TOT AMT PAID  
03 TOT AMT PAID  
04 AMT PAID PER RECIPIENT  
05 PCI CLIENTS IN LTR

03 PHYSICIAN SERVICES SUMMARY

NO REPORT ITEM  
01 TOT INCOME PHYSICIANS SEEN  
02 TOT INCOME DX REPORTABLE  
03 TOT CEPTIVE VISITS  
04 TOT INCOME KCM VISITS  
05 TOT INCOME VISITS  
06 TOT INCOME VISITS  
07 TOT INCOME VISITS  
08 TOT INCOME VISITS  
09 TOT INCOME VISITS  
10 TOT INCOME VISITS

04 IMPATIENT SERVICES

NO REPORT ITEM  
01 TOT INCOME ADMISSIONS  
02 AMT. LTR PER ADMISSION  
03 AMT. INCOME HOSPITALS  
04 AMT. LTR STAY/HO HOSP VISIT  
05 AMT. LTR STAY/HO HOSP VISIT

EX	PT	REPORT ITEM DEFINITION	STG	LOWER	UPPER	PD	FIRST	DISTRIBUTION
0	P	01.00.00	3.00	50.00	9999999.99	1.00	1.00	1.00
0	P	01.00.00	3.00	1.00	999.00	1.00	1.00	1.00

EX	PT	REPORT ITEM DEFINITION	STG	LOWER	UPPER	PD	FIRST	DISTRIBUTION
0	P	01.00.00	3.00	50.00	9999999.99	1.00	1.00	1.00
0	P	01.00.00	3.00	1.00	999.00	1.00	1.00	1.00

EX	PT	REPORT ITEM DEFINITION	STG	LOWER	UPPER	PD	FIRST	DISTRIBUTION
0	P	01.00.00	3.00	50.00	9999999.99	1.00	1.00	1.00
0	P	01.00.00	3.00	1.00	999.00	1.00	1.00	1.00

EX	PT	REPORT ITEM DEFINITION	STG	LOWER	UPPER	PD	FIRST	DISTRIBUTION
0	P	01.00.00	3.00	50.00	9999999.99	1.00	1.00	1.00
0	P	01.00.00	3.00	1.00	999.00	1.00	1.00	1.00



# STANDARD DEVIATION CALCULATIONS

1. Both Group Average (new) and the 'Average of the Averages' displayed

e.g.

"Average number of visits per patient"

N =	<u>No. of Providers</u>	<u>No. of Patients</u>	<u>No. of Visits</u>	<u>Avg.</u>
	Dr. A	1000	1000	1
	Dr. B	5	100	20
	Dr. C	5	100	20
	Dr. D	5	100	20
	<u>Dr. E</u>	<u>5</u>	<u>100</u>	<u>20</u>
N = 5 M.D.'s		1020	1400	81

$$\text{Group Average} = \frac{1400}{1020} = 1.4$$

$$\text{Average of Average} = \frac{81}{5} = 16.2$$

## 2. Levels of Data Collection

e.g.

"No. of Unduplicated Patients Seen"

<u>Class Group</u>	<u>Level</u>	<u>No. of Providers</u>	<u>No. of Patients</u>	<u>Undup. Count</u>
01	1	20	1000	Undup. per Indiv. M.D.
01	2	20	800	Undup. for Class Group
01-05	3	100	5000	Undup. at Categ. Level

## 3. Provider Weight Factor Options:

- Individual providers can be weighted more than  $N = 1$
- Individual providers can be eliminated from the calculation ( $N = \emptyset$ )



## TREATMENT ANALYSIS

- Direct diagnostic reporting available in all provider and recipient reports
- All data from physician, inpatient, outpatient claims reportable
- Reports on individual diagnoses or groups of diagnoses

## RECOMMENDED USES OF T/A IN NEW SURS:

- Focusing on special problem areas
- Epidemiological analysis

SYSTEMS  
PROGRAM-11.

DATE 04/27/77

INPATIENT ANALYSIS  
CLASS GROUP 01 CAST-OUTPATIENTS

LAST UPDATED 04/07/77 TA CL 01 DIAL 02 DATES 76-05/76-07 76-07/76-12 A

01 CLIENT LIND SECTION

NU	REPORT ITEM	EXPLANATION	REPORT ITEM	DEFINITION	T STD	DEV	LIMITS	UPPER	FREQUENCY	DISTRIBUTION
	TITLE						LOWER		PD	INCREMENT
01	NO CLIENTS-Physician	0	S	001:		2.0	0.00	9999999.99		
02	NO HOSP DISCHARGES	0	S	013:		2.0	0.00	9999999.99		
03	NO ENR CLIENTS	0	S	022:		2.0	0.00	9999999.99		

02 INPATIENT SVS

NU	REPORT ITEM	EXPLANATION	REPORT ITEM	DEFINITION	T STD	DEV	LIMITS	UPPER	FREQUENCY	DISTRIBUTION
	TITLE						LOWER		PD	INCREMENT
02	ALGS PER DISCHG W DX GASTRUE	F	R	014/013:		2.0				
03	MC T DISCHG W DX GASTRUE	F	R	026/013:		2.0				
04	MC T DISCHG W DX GASTRUE	F	R	015/013:		2.0				
05	AVI LAF CHG PER DISCHG W DX GASTRUE	E	M	016/013:		2.0				
06	AVI LAF CHG PER DISCHG W DX GASTRUE	E	M	017/013:		2.0				
07	AVI LAF CHG PER DISCHG W DX GASTRUE	E	M	018/013:		2.0				

03 ER OUTPAT SVS

NU	REPORT ITEM	EXPLANATION	REPORT ITEM	DEFINITION	T STD	DEV	LIMITS	UPPER	FREQUENCY	DISTRIBUTION
	TITLE						LOWER		PD	INCREMENT
03	TO1 MC ER VST 9500-9500	U	S	019:		2.0				
04	AVI MC ER VST 9500-9500	U	S	020:		2.0				
05	TO1 MC ER VST 9500-9500	U	S	021/022:		2.0				
06	AVI MC ER VST 9500-9500	U	S	022/022:		2.0				
07	AVI MC ER VST 9500-9500	U	S	023/022:		2.0				
08	TO1 MC ER VST 9500-9500	U	S	024/022:		2.0				

04 PHYSICIAN SERVICES

NU	REPORT ITEM	EXPLANATION	REPORT ITEM	DEFINITION	T STD	DEV	LIMITS	UPPER	FREQUENCY	DISTRIBUTION
	TITLE						LOWER		PD	INCREMENT
02	AVI LAF VST 9500-9500	U	S	025/002:		2.0				
03	AVI LAF VST 9500-9500	U	S	026/002:		2.0				
04	AVI LAF VST 9500-9500	U	S	027/002:		2.0				
05	AVI LAF VST 9500-9500	U	S	028/002:		2.0				
06	AVI LAF VST 9500-9500	U	S	029/002:		2.0				
07	AVI LAF VST 9500-9500	U	S	030/002:		2.0				
08	AVI LAF VST 9500-9500	U	S	031/002:		2.0				

USER ROLE IN IMPLEMENTATION OF S/UR

Michael Tristano  
Director, Medical Audit and Review  
Illinois Dept. of Public Welfare

In Illinois, we believe that any system to be effective must be designed to strict user specifications. "Canned" systems or programs simply are not applicable when transferred. This philosophy had its genesis with our experiences in working with such programs. For example, when attempting to implement a computer system to determine recipient fraud through various cross-matching techniques of computer files, we initially contracted with a firm that had a software package which given appropriate data could fulfill our needs. While using this "canned" program, it was obvious that we allocated more manual time than was necessary due to the inappropriate match between our specific needs and the program's capabilities. Obviously, through a series of experiences similar to the one described we determined the necessity of user involvement through the design and implementation stages. I am sure that many other States represented have had similar experiences. Illinois was determined not to be in a continual mode of modification of the S/UR subsystem. Management decided that each subsystem would be a joint project between the specific Bureau who would have the functional responsibility and the unit in data processing with the operational responsibility. My Bureau was assigned the joint responsibility with our Bureau's Information Systems to



develop and implement the S/UR subsystem. Fortunately, our Bureau was operating from a computer system prior to the decision to implement the MMIS version of S/UR.

In other words, we had a great deal of practical experience and had a basic conception framework from which to gauge our needs. To analyze our needs and translate these to specific capabilities became the initial focus of the project. All unit supervisors and management personnel were asked to respond to a survey. This survey questioned each individual unit supervisor as to the amount of manual effort given to a series of tasks.

This form is

rather simple, yet it allows maximum feedback from individuals assigned the day-to-day field responsibility. Each unit supervisor was instructed to analyze time spent on each task and accurately report other open ended questions were to be discussed with all staff members and the result of these discussions were to be reported. Later, an interview by the member of my staff assigned to manage the actual design and implementation of the project was conducted. The purpose of the interview was to magnify or investigate basic areas of extensive manual intervention. The data from our survey and the subsequent interviews were then analyzed and we determined a series of improvements which we

believed necessary for the successful implementation of the entire concept of S/UR to succeed. Basically, the results could be categorized as the need for:

- A. A creditable selection process
- B. Moving away from paper output
- C. The use of statistical concepts (random sampling, etc.)
- D. Decreasing manual processing
- E. A user driven system
- F. Flexibility

Each of these broad categories of need had to be operationalized in terms of the S/UR subsystem. These features have been adopted within our general and detailed design and are awaiting implementation. As part of our contract for each developmental stage my office has final approval and must review the contractor's designs and tests during the implementation stage. This focus of responsibility upon the functional unit is one of the key elements in a user designed system. I realize the above procedure will take many staff hours to first survey, interview, compile and operationalize data to ascertain the specific needs of your program. However, the rewards will be significant in both restructuring your management objectives and in short-circuiting large manual processing through early computerization. The intervention which I have outlined seems to be highly

adaptable for States on program planning budgeting and can be accomplished through the budgeting cycle. We have found this most effective. If any State is interested in obtaining greater detail on any of the specific modifications we have made to the original design document completed by S.R.S., please feel free to contact me. We will be more than happy to send you an indepth paper on each of these aspects of our system. Thank you for your attention and courtesy.

THE PHYSICIAN AMBULATORY CARE EVALUATION PROJECT:  
COMPUTER - ASSISTED PEER REVIEW OF AMBULATORY SERVICES

James Q. Cannon, M.C.P.  
Utah Professional Review Organization



## Introduction and Summary

The Physician Ambulatory Care Evaluation (PACE) program is a physician-directed professional review effort which utilizes claims data and an advanced automated system for building patient ambulatory care histories and screening them as to compliance with clinical guidelines. Both quality and utilization issues are addressed (with emphasis on the former). Where patterns of variation from peer expectations are observed, intervention is directed toward improving patient care. The approach involves educational contacts with providers rather than immediate punitive action. Interdiction of payment is only employed when other methods fail. Where aberrations arise that are not within the province of the provider to resolve, the matters are referred to the agency which can deal with them.

The PACE program is in full operation in Utah, performing review under contract with the Utah Medicaid program. Claims for physician services, lab and hospital outpatient charges, and prescription drugs, are added to the PACE patient history file and are subject to review. The program is conducted by Utah Professional Review Organization (UPRO), a private non-profit corporation, with data processing services currently

subcontracted to Optimum Systems Incorporated (OSI). UPRO is closely tied to and predates Utah PSRO and is an offspring of the Utah State Medical Association.

The functions performed by UPRO and its subcontractor are currently supported out of State funds and operational MMIS funding, since the PACE data support system was developed under funding from the Medical Services Administration to be an MMIS module. While currently a contracted service between the State and UPRO, it is expected that, at some point, at least the professional review component of PACE will become a PSRO function.

A relatively clear division of responsibilities was worked out when the State of Utah contracted with UPRO to conduct a program which would satisfy State utilization review obligations for the types of services described above. The State is responsible for all MMIS functions including coding not done by the provider, data validation, entry, duplicate checks, fraud detection, pricing, and other aspects of administrative review. Furthermore, all communications with Medicaid clients or with social service case workers and all payment sanctions are handled by the State. UPRO is responsible for all clinical determinations and associated contact with the provider. The PACE program

operates under the same confidentiality requirements as the Medicaid agency, utilizes the same reference files, and is subject to State monitoring. Though the data support system for PACE is currently run by a private subcontractor, the system is fully compliant with the general MMIS systems requirements. Because UPRO adds information to the patient and provider history set in the form of exception messages indicating guideline failures and reviewer judgements, PACE patient and provider profiles are not routinely made available to State Medicaid officials; however, all files are open to authorized audit.

#### Criteria

One of the essential features of PACE as a means to peer review is the systematic and objective application of screening criteria to ambulatory medical care data and the reporting of instances where those criteria are not met. The concept behind PACE is that these guidelines be adopted based on the consensus of peers representing the leadership of each specialty and that screening be automated to the extent possible.

The system was designed to accept a wide variety of statements regarding expectations as to medical care in given situations. Such statements are not limited simply to the classical form, defining appropriate and inappropriate care for specified diseases or problems; rather,

guidelines can also be written for medical procedures, drugs, types of patients, provider attributes such as specialty, and combinations of the above. Time limitations and episode definitions are also possible. A few examples illustrating the forms and types of guidelines now in use are shown in Figure 1. Table 1 breaks the entire set of guidelines currently in use down by subject and type.

It is important to note that these guidelines are only used for screening. It is understood with regard to most of the matters addressed that some patients and situations will require other approaches. Generally, they are intended as a means to identify and examine patterns of current practice and patient care. Physician review of those patterns is necessary to determine whether they are inappropriate or not. Consequently, the guideline set is constantly being modified, with new guidelines being added as they are developed or refined, and with impracticable or outdated ones being dropped from the system after being tested.



## Figure 1

### EXAMPLES OF CRITERIA NOW IN USE IN PACE

The following are subject to review:

1. Adult patient with pneumonia without follow-up chest x-ray during episode.
2. MAO inhibitors prescribed by non-psychiatrists.
3. More than two EKG's per year for diagnosis other than heart disease, arteriosclerosis, or chest pain.
4. Lomotil<sup>®</sup> for children under two years.
5. Anticoagulant therapy lacking prothrombin time each month.

TABLE 1  
UPRO PACE Screening Guidelines, by Subject and Type  
in use April 1, 1977

TYPE	SUBJECT					
	Diagnosis (I)	Procedure* (II)	Drug (III)	Patient (IV)	Provider (V)	TOTAL
A. Required service or therapy	55	6	3	0	2	66
B. Contraindicated service or therapy	30	12	53	2	1	98
C. Prerequisite history needed to justify service, therapy	0	10	1	0	0	11
D. Utilization limit for service or therapy	19	29	20	0	8	76
E. Untoward symptoms during therapy	0	0	2	0	0	2
TOTAL	104	57	79	2	11	253

\* Includes all injections

Notes:

1. Study guidelines (which generate a patient treatment profile but register no exception) make up 3% of the guidelines.
2. Age or sex-specific guidelines comprise 16%.

## Automated Screening

Weekly, the MMIS generates a PACE file containing data for all claims in the current run from clinics, pharmacies, hospital outpatient departments, independent labs and the majority of physician claims. (Anesthesiology, assistant at surgery, and professional component claims are excluded since the information they contain repeats other claims data.) Inpatient hospital claims data are also transmitted but are not currently utilized in PACE history. The file is transmitted to UPRO's data processing subcontractor via computer tape.

Figure 2 outlines the data processing sequence that ensues. The data are subjected to final editing to insure a match with patient and provider reference file information sent periodically and are then added to history. History data are organized and linked by patient and, secondarily, by provider.

When history files have been updated, screening begins. The first step in this screening process involves scanning the new claims data received for that week to determine which, if any, screening guidelines should be applied to a given patient's care. The application of a guideline is triggered by the presence of a data element on a new claim which matches the subject of the screening guideline. Each guideline contains a definition

of the amount of patient history to be searched in either or both chronological directions from the triggering data element. Also indicated is whether some additional patient care history is required before screening occurs. When a delay is specified, a record of the case is stored and screening is completed at a later time.

Screening involves examining patient history to determine if the care rendered exceeds the limits expressed in the guideline. Instances of care varying from the guidelines are recorded in the data base as exceptions and are listed in a set of reports to UPRO.

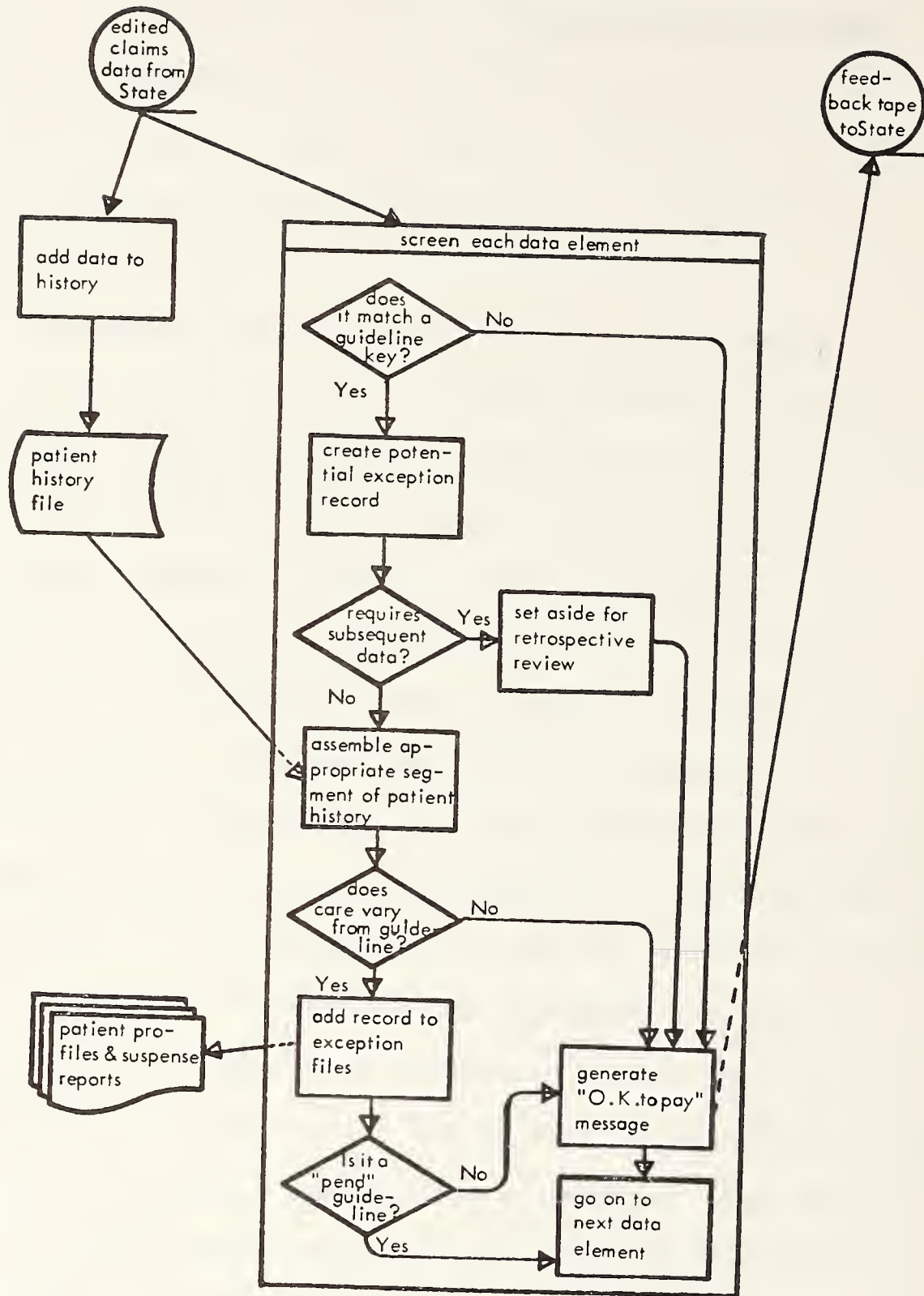
The PACE module was designed so as to be able to operate in a prepayment mode by means of "pend" guidelines, where an intervention prior to payment was felt to be necessary. Exceptions to such guidelines under such an operating mode would stop payment for that service until and unless a return disposition message were sent to the State endorsing the service for payment. It should be noted, however, that such screening in the Utah system resulted in a week's delay in payment to all physicians in order to suspend payment for a handful. The benefits of the latter simply did not equal the disadvantages of the former. Consequently, the PACE-MMIS interface has been modified so that payment occurs as soon as claims clear



MMIS. Any payment sanctions arising from professional review are currently imposed in the form of adjustments against future billings.

Figure 2

REGULAR PACE PROCESSING CYCLE



## Outputs of the PACE Data Support System

The MMIS/PACE module generates numerous outputs which are used by UPRO and OSI. Only three types are mentioned below. These are the most significant in the review process.

### 1. Patient Treatment Profile

The patient treatment profile is the primary tool in professional review under PACE. This report displays all services received by a patient during the past year or so that have been billed to Medicaid. Exceptional instances of care are indicated and a place is provided for a physician reviewer to record his evaluation of the appropriateness of each exception.

An example of a patient treatment profile is illustrated in Figure 3. The circled letters will be referenced in the text. As may be observed, the format is designed for readability by the physician reviewer. Identifying information on the patient is displayed in the upper right corner of each page (A). The contents of the history file for that patient are arrayed chronologically according to date of service (B). The specialty and identification number of each provider of service are listed at the left (C). The body of the profile

records the description (D) as well as the code (E) for each service and for the diagnoses for which those services were performed. Up to four diagnoses may appear per claim. An "E" in the "Dx Ref" column (F) indicates that the service related to more than one of the diagnoses listed. Prescription drugs are similarly identified, and the dispensing date, the identification of the prescribing physician, where available, and the number of units dispensed (G) are shown. Though not shown in the figure, the actual computer-produced format displays the amount billed, the amount paid, and the claim and line numbers for each item on the right hand side of the profile.

All exceptions, regardless of when they occurred, are noted by means of a reference number in the "Flag#" column (H). Each new instance of exceptional care identified in the screening process is also starred. At the bottom of the page (J), each exception flag is footnoted with a description of the guideline not met. The fields to the right (K) indicate evaluations made of previous exceptions and prompt the reviewer to record one of seven possible review judgements for new exceptions. A review date and an identifying code for the reviewer are displayed for exceptions already evaluated.

A detailed examination of one aspect of this profile will help illustrate the process:



Ⓐ

# UPRO PACE PATIENT TREATMENT PROFILE

PATIENT NAME: LEE xxxxxxxx  
SSN: 519-00-0000  
SEX: M AGE: 59

(C)	PROV SPEC	PROV ID	(B)	DATE OF SERVICE	(H)	FLAG #	(F)	DX REF	(D)	DESCRIPTION	(G)	UNITS	(E)	DIAG	PROC/ DRUG	AMOUNT BILLED	AMOUNT PAID
MED	11xx7		11/06/75							A.....CONGESTIVE HEART FAILURE B.....HRT RHYTHM DISORDER NEC A OFFICE VISIT-LMTD SRVC, ESTAB PT					90050	12.00	9.00
MED	11xx3		11/12/75							<> DIAZEPAM-5 MG TABS		100			004000501	10.00	10.00
MED	11xx7		12/04/75		1*					A.....CONGESTIVE HEART FAILURE A.....OFFICE VISIT-LMTD SRVC, ESTAB PT E ECG W/INTERPRET/RPT, 12 LEAD					90050 93000	12.00 15.00	9.00 12.00
MED	11xx3									<> DIAZEPAM-5MG TABS		100			004000501	10.00	10.00
MED	11xx7		01/10/76							<> PROPRANOLOL-10 MG TABS		100			046046191	8.00	6.00
PHAR	30xx7		01/22/76							<> DIGOXIN-0.25 MG TABS		100			081024955	3.00	3.00
MED	11xx7									A.....CHR ISCHEMIC HRT DIS NEC B.....CHEST WALL PAIN E.....OFFICE VISIT-LMTD SRVC, ESTAB PT E ECG W/INTERPRET/RPT, 12 LEAD					90050 93000	12.00 20.00	9.00 16.00
MED	11xx3		01/27/76							<> INDOMETHACIN-25MG TABS		30			006002582	4.00	4.00
MED	11xx7		02/23/76							<> DIAZEPAM-5MG TABS <> DIGOXIN-0.25 TABS		100 100			004000501 081024975	10.00 2.00	10.00 2.00
			04/06/76							A.....CONGESTIVE HEART FAILURE A OFFICE VISIT-LMTD SRVC, ESTAB PT A ECG W/INTERPRET/RPT, 12 LEAD					90050 93000	12.00 20.00	9.00 16.00

① FLAG #

GUIDELINE NOT MET

MED REWV NON  
APPRO INCON PROV EDU

WARN- ING	NO PAY	REVW UNNEC	REVIEW DATE	REVI- EWER

1. FLAG USE OF PROPRANOLOL W/HX OF CONGESTIV FAILURE-PAST 90D  
2. FLAG MORE THAN 2 EKG'S PER 6 MOS. FOR HEART DISEASE (DXL #03

03/26/76 24

24

In early 1976, pharmacy claims data were transmitted to the PACE system indicating that a prescription had been filled on January 10, for 100 units of the drug propranolol. The prescribing physician was #11XX7, an internist.

The screening process identified three guidelines keyed to the drug class code for propranolol, which indicated that the following were subject to review:

- (1) Concurrent use of propranolol and aminophylline.
- (2) Propranolol prescribed in the presence of a history of congestive heart failure.
- (3) Concurrent use of propranolol and digoxin, except for patients with arrhythmia.

In addition, any concurrent use of sulfonylureas or phenformin with propranolol was also reportable but for study purposes only.

Screening for compliance with the first and second guidelines occurred immediately upon receipt of the above mentioned pharmacy claim. The third guideline required an additional thirty-day period of history of following the dispensing date of the prescription.

The portion of the profile detailed in Figure 4 displays recent history information available for this patient at the time the pharmacy claim for propranolol

was added to the PACE data base. A search of prior thirty-day period uncovered no use of aminophylline. However, the diagnosis of congestive heart failure had been recorded within ninety days prior to January 10, and thus an exception to guideline flagging propranolol with congestive heart failure was noted as exception #1 for this patient. Thirty days later, a subsequent search was made for compliance with the digoxin guideline. Though digoxin was prescribed on January 22 no exception was recorded because the patient had been diagnosed as having heart rhythm disorders. The exception description section at the bottom of the page reveals that reviewer 24, in evaluating the profile on March 26, questioned the use of propranolol in this case and recommended an educational inquiry to provider #11XX7 regarding the use of propranolol. This decision was based not only on the provider's care of this patient but the fact that two other Medicaid patients had been similarly treated.

## 2. Review Requests

A review request is an automated search of history data for elements matching user-specified parameters. When a match is found, the entire patient treatment profile is assembled and printed. The search continues until the entire data base for the time period specified

has been scanned or until the specified number of profiles have been produced. This function is most commonly used to retrieve a single patient's profile. In addition to simply specifying a patient identification number, request parameters may involve any one or combination of the following:

- a. patient age, sex
- b. provider ID, specialty
- c. diagnosis code range
- d. procedure code range
- e. drug code range

This function allows special investigations of the data base regarding matters not addressed by the screening guidelines.

### 3. Summary Reports

Several reports can be produced which summarize, according to the need specified, the contents of the PACE exception file, the line-item file, and the review cases file. These are important aids in identifying and assessing patterns of care, in developing general comparative data, and in measuring project impact. These are designed to supplement, rather than duplicate MMIS S/UR reports.



Figure 4

DETAIL FROM PATIENT TREATMENT PROFILE

PATIENT NAME: LEE/XXXXXX  
SSN: 000-00-0000  
SEX: M AGE: 59

PROV SPEC	PROV ID	DATE OF SERVICE	FLAG #	DX REF	DESCRIPTION	UNITS	DIAG	PROC/ DRUG
MED	11x37	12/04/75	1*	A	.....CONGESTIVE HEART FAILURE		427.9	90050
				A	OFFICE VISIT-LMTD SRVC, ESTAB PT			93000
				A	ECG W/INTERPRET/RPT, 12 LEAD			
					<> DIAZEPAM	100		004000501
		01/10/76			<> PROPRANOLOL	100		046046191
		01/22/76			<> DIGOXIN	100		081024955

MED REVIEW NON WARN NO REVIEW REVIEW REVI  
APPROXCONPROV-EDUC-ING---PAY-UNNEC--DATE--EWER  
X 03/26/76 24

1\*FLAG USE OF PROPRANOLOL W/HX OF CONGESTIVE FAILURE-PAST 90D-

## Staff Screening Activities

The PACE system has been designed to eliminate the need for a large staff. The computer performs many of the clerical and screening functions which are handled manually in traditional claims review processes. The reason for this approach is not only to keep staffing needs down but to minimize the subjectivity of screening prior to peer evaluation.

The fact that the data processing system is sophisticated, however, imposes some significant demands on staff. Few, if any, physicians associated with the program can be expected to take sufficient time away from their practice to learn the intricacies of the system. Therefore, staff must be able to understand both the concerns of the professionals and the capabilities of the machine and provide a linkage between the two.

Staff screening involves the determination of the cases which are ready for physician review and is structured to make the professional review component as efficient as possible by selecting only those cases where there is some likelihood that inquiry or intervention will be in order. UPRO's philosophy is that isolated variations from guidelines, unless clearly inappropriate, should be discounted. This philosophy recognizes

that the professional responsibility of the provider should be honored when his intent is unclear and details of the case are unavailable. Since most guidelines are designed to assist in the identification of inappropriate provider practice patterns, exceptions to such guidelines are generally not presented for physician review until a provider's care of multiple (usually three) patients is exceptional for the guideline. Thus, a review case often consists of several patients treated by a single physician. However, a case may be a single patient where the guideline is directed toward identifying:

1. Inappropriate patient utilization of drugs or services.
2. Situations where clear-cut risk to the patient exists that may be unknown to the providing physician.
3. Other cases where patient care varies substantially from the expected without any evidence of the reason or need.
4. Further instances of an exceptional provider practice pattern which should not be endorsed.

Twice monthly, staff screen the exception listings to identify new cases for physician review and request the relevant patient profiles for those identified.

They also screen for continuing exceptional care patterns relating to patients or providers previously reviewed.

Back-up materials relating to other aspects of that provider's practice and earlier actions taken regarding either the provider or the patient are added by staff to the new profile(s) pertaining to the case. As needed, staff performs other background work to verify data, to highlight issues, to prompt reviewer consideration of certain factors, etc.

It should be emphasized that some exceptions registered by the computer are never presented for physician review. Some are isolated variations from a guideline for which only patterns are felt to be significant. Others require additional manual screening beyond what the computer logic can handle and are found to comply with the intent behind the guideline.

#### Professional Review

An essential element of professional review process is individualizing the considerations to assure that extenuating factors which could appropriately modify the application of guidelines are taken into account. The nature of the data utilized in PACE requires a fairly extensive set of interpretations and inferences in reaching an evaluation as to appropriateness. The credibility of educational efforts depends on those



judgements being made by peers who presumably understand the realities of medical practice first-hand.

Since most of the care reported to PACE has been rendered by primary care physicians, the bulk of the review is performed by physicians appointed from the primary care areas (family practice, internal medicine, pediatrics, and obstetrics/gynecology). Exceptions to guidelines written by other specialties are reviewed, when possible, by consultants from those specialties. However, because a substantial length of time is required in some instances to assemble enough work for a given specialty consultant to warrant his time, primary care reviewers are often involved in the preliminary appraisal of pattern data. However, no decisive action is taken on the basis of their review until the appropriate consultant has concurred.

Because of the importance of prescription drug information to the PACE review process, pharmacological consultation is an important component of professional review. Pharmacy consultants work closely with physician reviewers and provide important information as well as a link to the dispensing pharmacists.

A reviewer evaluates both the appropriateness of the individual aberration from guidelines and recommends an approach for dealing with the case. With regard to the first, six coded evaluation options are available

which indicate the following:

1. The care failing the guideline is in fact medically appropriate.
2. There is insufficient data to conclude firmly that care is inappropriate but neither is justification for the care apparent.
3. The care does vary from peer expectations but the problem does not seem to arise from provider judgment.
4. The care is inappropriate and some educational intervention is in order.
5. The inappropriate pattern continues without justification and some further, more pointed intervention should occur.
6. Despite educational efforts, no response is apparent. The provider is to be informed that UPRO will not endorse for payment future inappropriate care of this type.

With respect to disposition approaches, the options are as follows:

1. Reconsider the patient later
2. Reconsider the practice pattern later
3. Close the case
4. Refer to a consultant
5. Refer to the Ambulatory Care Review Committee

6. Refer to the State
7. Contact the provider
8. Other

The provider is contacted by one of the reviewers when at least two reviewers have evaluated the exceptional case and agree that contact is in order. The issue at hand may be a matter of a variant practice pattern, apparently inappropriate patient activity, or simply a quirk in patient care arising from inadequate communication among the parties involved. Letters are the most common form of contact and are most readily documented, but phone and face-to-face contacts are also employed successfully. UPRO does not contact patients directly; the State is advised where some inquiry or information to patients is needed.

The tone of an initial communication is one of inquiry. Specifically acknowledged is the fact that information available to PACE is incomplete and subject to occasional misinterpretation. The provider is invited to discuss his approach with his peers and to make suggestions regarding review criteria. When behavior determined by peers to be unacceptable continues, the physician is put on notice that future claims of a specified type will no longer be approved. At this point, claims denials may occur. The decision for

denial of payments rests with the State but is normally consistent with advice by UPRO.

In addition to individual contact with providing physicians, general circulation to the professional community of educational materials also occurs, usually under the auspices of the Academy for Continuing Medical Education, a subdivision of the Utah State Medical Association. These educational efforts take the form of articles, manuscripts, selected references, and other programs. Topics for such materials are those matters where the practice of a large number of physicians varies from best current information found in the literature.

Pharmacy consultants also participate in the feedback process by contacting the dispensing pharmacist in exceptional cases both in order to gather information and to encourage the pharmacist to monitor the drug profile involved. Normally, they do not contact the physician(s) shown as prescribing the therapy. This is felt to be the province of the physician reviewer.

A significant intervention opportunity involves reporting to the State those problem cases which require investigation or action outside the scope of PACE responsibilities and those changes needed in Medicaid program policy. For each special problem case encountered, UPRO describes the nature of its concern and provides



the necessary identifying information so that the State can retrieve its own data on the case.

Frequently, these cases suggest the need for committing the responsibility for managing the patient's care to a single physician and pharmacy. Other cases require case worker involvement or special assistance, as is apparent in child abuse. For policy issues, UPRO normally serves as representative of the State Medical Association and indicates, for example, areas where the benefits package should be expanded or restricted or where new instructions are needed.

The intent of these PACE review activities is, as mentioned, to improve physician performance and patient care and to assure quality and sound utilization. Though the data deal only with care received by Medicaid recipients, the communications are intended to be generic so as to avoid catalyzing a double standard of practice or a reduction in the availability of medical care to Medicaid patients.

A managing committee made up of reviewers representing the primary care specialties is chaired by the PACE Medical Director. This group sets policy for ambulatory care review, acts on recommendations to make exceptional practices by certain providers subject to potential non-endorsement, determines all patients and patient care situations to be referred to the State,

approves new types of letters to be sent, and a variety of other tasks. The Committee meets twice a month for a total of about three hours.

#### Other Uses of PACE

In addition to the regular PACE operations described in the previous section there are two other activities of UPRO/Utah PSRO for which the existence of the PACE data base is significant.

The first of these is the long term care review demonstration project being conducted by Utah PSRO. This demonstration is presently operating in 20 Salt Lake County nursing homes and it involves a combination of concurrent review and professional intervention techniques adapted from the experiences of our hospital review program and PACE. The project is currently limited to Medicaid patients in the participating facilities. One feature of the demonstration is an examination of the application of the PACE technology to this new care site.

The PACE data base already includes comprehensive drug information on Medicaid nursing home patients and a method is being developed to add diagnosis/problem information to the data base from our manually produced patient abstracts. This aggregation of information will permit the operation of a PACE-type

screening system to nursing home patient data. In addition, comparisons will be made of drugs purchased versus those recorded in patient records as actually being dispensed. Some discoveries of interest have already been made in this latter area.

One of the measurement issues for the long term care demonstration relates to the extent that PACE data can be substituted for manual data collection and the efficiencies that might produce.

Concerning the PACE-long term care interface we are also exploring the possibility of adding Medicare cross-over claims to the routine PACE data base. This addition has ramifications beyond the review of long term care demonstration. Discussions with State personnel are on-going.

Funding for these long term care review activities has been obtained from the Bureau of Quality Assurance, DHEW.

The second activity designed to test new uses for PACE would involve a linkage between current PACE data and information which can be gathered as part of our in-patient hospital review program (OSCHUR). Several issues have been identified where an aggregation of data from in-patient and ambulatory records will permit a more informed evaluation than either standing alone.

For the foreseeable future, the matching of information from the two data bases would be performed manually. During the next year, we expect to explore the range of clinical issues for which the expanded information resource may be productive and to understand the depth of data required for professional reviewers to make judgements. Whether this interface should ultimately be automated remains to be determined although some potential benefits are apparent.

#### Origins of PACE

UPRO was formed in 1971 as an outgrowth of efforts by the Utah State Medical Association (USMA) to identify effective ways of increasing the public's confidence in the accountability of the profession to the citizenry. Several site visits to existing review programs had been made, the literature on the subject had been scanned, and the recommendation was returned that a separate foundation-type corporation be established. Initial start-up funds were provided by USMA, and immediate efforts were undertaken to find more substantial sources of operating funds. This led to a grant from the National Center for Health Services Research and Development under the Experimental Medical Care Review Organization (EMCRO) program.

The PACE project was officially begun in July 1972



when EMCRO funding for ambulatory care review in Utah began to flow.

During the first few months of the Utah EMCRO, major decisions were made concerning the scope of PACE and the design to be followed. Perhaps the most significant decision was to structure the program in a way that it would primarily address the quality, as opposed to the utilization, of care in physician office practice.

UPRO determined that the project should be designed to function in a real-world environment and in a way which would permit operational implementation during the near term. This posture led to the decision to utilize claim forms submitted by physicians and others as the principal data source for the project. Not only would claim form data permit the rapid implementation of the review system, but it represented a continuously available source of information. These facts overrode the inherent limitations of claim form data in terms of accuracy and completeness.

An arrangement was worked out with the Utah State Department of Social Services to give UPRO access to each batch of claims once payment had been completed.

A preliminary set of guidelines was developed to provide a basis for automated screening logic development.

These were built upon the combined thesis that the patient history is at the heart of clinical review and that the sum of the factors observed in multiple patient histories will lead to a profile of a physician's practice in a given regard. Such a concept favored an approach toward screening which would detect aberrations from guidelines in an individual patient's care, record those, and enable the identification of physicians whose practices revealed patterns of variation from any one guideline.

The physicians supported an automated screening approach because of its objectivity and because a large number of subjects could be monitored simultaneously and systematically.

UPRO solicited proposals from several leading data processing firms for a facilities management contract and eventually selected OSI. From the outset, a collaborative, interactive working style was developed.

By the fall of 1972, OSI had begun entry of claims data. Automated screening began early in 1973 on an experimental basis.

EMCRO funding continued thru June 1974. During that time, it became clear that the premises on which the design of PACE was based were viable. A successful methodology combining automated and professional review of patient care history information had been demonstrated.

However, no feedback or intervention activities with individual providers had been undertaken.

A second phase of the project began in mid-1974. It involved a two-pronged effort: EMCRO-PACE was to be put into operation while, simultaneously, a substantially enhanced PACE data support system was to be designed to function as a module of the Medicaid Management Information System. A contract between the Utah Medicaid Agency, the Bureau of Quality Assurance and the Medical Services Administration (SRS) and UPRO was negotiated to fund this effort.

On the operational side, hundreds of hours of physician time were spent that year adding to and refining the criteria set. In addition, certain refinements were made to the data support system in anticipation of full review activities and of the establishment of a direct system-to-system interface with the MMIS. All physicians in Utah were informed that the project was operational, and the first individual educational letters to providers were sent in the spring of 1975.

The development of the PACE module led to more extensive enhancements to the PACE approach than were originally anticipated. The flexibility of the screening logic was significantly expanded; much time was spent designing the patient treatment profile in its current form; and a variety of other reporting and analysis

capabilities were expanded.

Perhaps the most time-consuming activity during this period involved working out with the State and with OSI the nature of the technical and policy elements of PACE's relationship with the Medicaid program. Issues resolved ranged from the format of data to be exchanged to types of mutual guarantees needed as to the responsiveness of each party to the other's continuing program needs.

Fiscal year 1975-76 saw the implementation and acceptance testing of the PACE Module. The entire guideline set was converted to the new logic and expanded. Drug data were added to the data base and a scheme for categorizing drugs for guideline screening purposes was developed. The Ambulatory Care Review Committee was organized and became a significant element in the professional review process. User documentation and working procedures were developed. Contacts with providers became more varied. During most of this period, reviewers were evaluating each exceptional profile by itself. Physician patterns were observed generally after initial review.

By July 1976, the reviewers' exposure to the nature of the data and the issues flowing out of the screening system had reached a point where changes were possible to improve the efficiency of their activity. This was



in keeping with UPRO's objective for the coming contract period of sharply increasing the volume and the breadth of PACE educational interventions. Thus, an approach was devised to focus review efforts on those cases most likely to indicate a need for contact with the provider. Instead of requiring immediate physician evaluation of each new exception, the system was modified to hold the printing of exceptional profiles until staff screening of the exceptions file determined that, for a given provider or patient, the aggregation of exceptional care instances suggested that review was now warranted. All exceptional care information could then be reviewed for these cases at one time. This focused review approach has generated a dramatic change in the number and variety of contacts without requiring additional reviewer time.

Early in 1976, UPRO began to refer patients as well as nonendorsed claims back to the Office of Medical Services for State action. Substantial advice and encouragement was given as to how the State might accomplish a modification in patient behavior where inappropriate client utilization was observed. A restriction policy was recommended whereby the patient might be requested to select a single physician and/or pharmacy who would be responsible for all care. Services by other providers would be allowed only by referral

from the primary physician. Other patients referred were children screened out as having been seen repeatedly for injuries and other problems suggestive of neglect or abuse.

### Results

UPRO is now processing an average of 64,000 Medicaid claims per month through the PACE system, of which 3/4 are pharmacy claims. Individual aspects of care fail PACE screening guidelines at a rate of 16.2 per 100 physician-patient encounters.

Physician and pharmacy review consultants are spending approximately 65 hours per month reviewing the exceptional cases produced. Slightly more than a third of this time is spent in committee review activity. Additional committee time is spent in the development and refinement of screening guidelines. Interest on the part of reviewers continues to be very high.

The number of contacts with individual providers has increased substantially during the current period as Table 2 indicates. Not only are UPRO review consultants writing to their peers individually when an exceptional practice is noted, but also they are corresponding to advise physicians of exceptional care arising from client behavior or involving several providers. In addition, communications with pharmacies have begun to encourage them to maintain drug profiles on their patients and to

TABLE 2

Contacts with Individual Providers  
Regarding PACE Findings

	Current Contract (Oct. 1, 1976-Apr. 30, 1977)	Entire Project (May 1, 1975-Apr. 30, 1977)
Total Documented Contacts	359	532
Letters	315	423
Providers	245	283
Subjects	47	54

contact prescribing physicians where undesirable quantities or combination of drugs are noted. As would be expected, responses from providers to these contacts have been mixed, but on balance constructive.

Besides individual contact, generalized educational materials arising out of PACE and developed under the auspices of the UPRO Ambulatory Care Review Committee have been disseminated to the professional community on six occasions since October 1, 1976:

<u>Subject</u>	<u>Recipients</u>
Inadequate documentation that a psychiatric evaluation has been performed	All psychiatrists in Utah
Indications for pediatric use of tetracycline	All physicians in Utah
Gamma globulin use	All physicians in Utah
Misuse of hospital emergency services	All hospitals in Utah
Potential abuse of common psychotropic drugs	All physicians in Utah
Indications for tonsillectomy and adenoidectomy	All otolaryngologists in Utah

Since early 1976, UPRO has been referring matters to the State Medicaid Agency which require consideration, investigation, or other action by that Agency. Table 3 indicates the number of referrals for each type of situation referred.

A brief analysis was recently done to assess



TABLE 3

## PACE Referrals to State Office of Medical Services

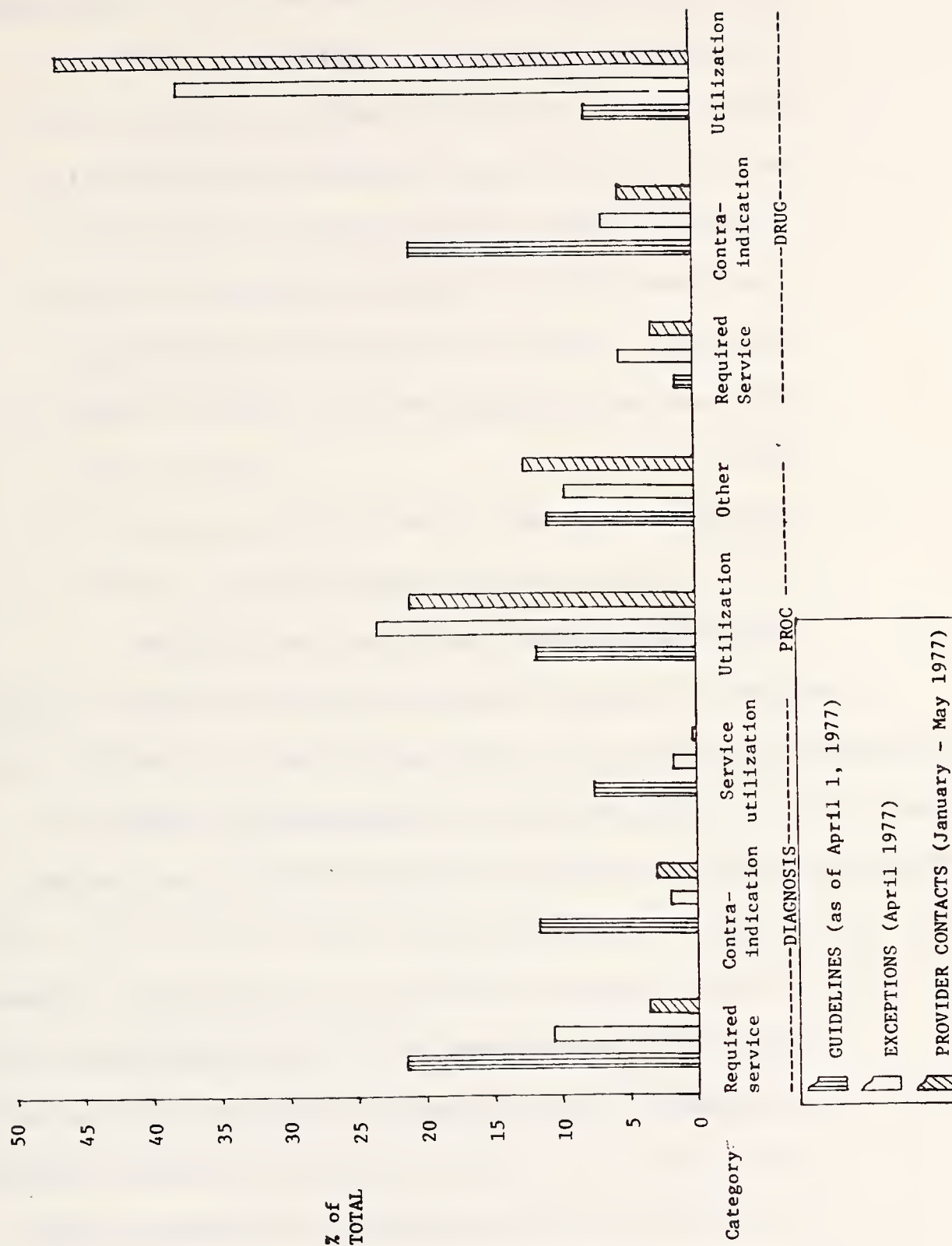
TYPE	NUMBER	
	prior to Oct. 1, 1976	Oct. 1, 1976 -Apr. 30, 1977
Instances of nonendorsed care, where previous educational efforts to modify exceptional practice patterns have failed	19	187
Apparent duplicate billing not detected by MMIS	21	40
Exceptional client utilization	34	37
Children experiencing repeated injuries	20	94
Other	7	7
TOTAL	101	365

the PACE screening guidelines. The results are interesting in what they reveal about the way the PACE program operates and about the implications for review programs in general.

Exceptions reviewed during April, 1977 and provider contacts made during the first five months of 1977 were broken down by the category of the associated guideline using the scheme employed in Table 1. A comparison was then drawn between the relative shares of total guidelines, total exceptions, and total subjects for each type of guideline. Figure 5 displays those where significant variation among the shares is noted.

1. Though utilization-related guidelines represent only 30% (76 of 253) of the guidelines, they accounted for almost 2/3 of all exceptions and an even larger percentage of the contacts. The majority of the utilization exceptions and contacts (1020 of 1710 and 108 of 152) related to the 20 guidelines keyed to drugs.
2. Contraindications generally are described in 39% of the guidelines. However, exceptions to such guidelines make up only 15% of the total exceptions and 20% of the contacts.
3. Guidelines requiring monitoring during drug therapy (i.e. drug guidelines of Type A)

FIGURE 5  
Percentage Share of Guidelines, Exceptions, and Provider Contacts by Major Guideline Category



generated 4 1/2 times the number of exceptions as expected, based on the share of the guidelines they represent (1.2%). The share of educational contacts, however, was only 3%.

4. In contrast, guidelines warning against the use of certain drugs because of potentially adverse effects or interactions failed less than one-third as often as expected (6.6% of the exceptions vs. 20.9% of the guidelines) and produced an even smaller share of the contacts.
5. Diagnosis-related guidelines comprise 41% of the guideline set but produced only 14% of the exceptions and 6.5% of the contacts.

A variety of efforts by UPRO as well as Health Care Management Systems, Inc., are now underway to assess the impact of the PACE program. The beginning results of UPRO's analysis are below. The HCMS evaluation study will be available in July.

1. A study was made of changes in exception rates for a provider regarding a single guideline for equivalent time periods prior to and following his receipt of a letter from UPRO on that subject. 116 situations were studied where the provider received the letter(s) during 1976 or earlier and sufficient subsequent information is



available to compute post-letter exception rates.

a. Of 108 written to once on a subject

- 84.1% (92) show no exceptions at all or a clear decrease in their exception rate since the letter
- no change is yet evident for 5.1% (6)
- an increased number of exceptions has been observed for 9.3% (10)

b. Of the 8 written to more than once on the same subject

- 4 had already shown a decrease after the first letter
- 7 evidenced a decreased exception rate after the second letter
- for all who receive three letters, a marked decline was observed.

2. A guideline-by-guideline analysis is now underway. The only results available thus far are below:

Tetracycline exceptions (i.e. prescribing tetracycline to children under 8 years of age) per

• 100 tetracycline claims:

May-June 1976      average 4.58

July-Dec. 1976      average 3.71

Jan. 1977                      2.86

Thus, a 37.6% decrease in 8 months

3. An analysis of utilization patterns regarding the most frequent injections covered under Utah Medicaid policy is reported in Table 4. It will be noted that injections of all types declined one-third in the year between June 1975 and June 1976 and almost as much between December 1975 and 1976.
4. Of the first 76 pediatric injury referrals to Protective Services, at least one-third have been validated and have led to intervention beyond investigation. This validation rate is at least twice what UPRO had expected. As a result, UPRO has jointly agreed with Protective Services staff to modify the guidelines to capture injury patterns at an earlier point in their emergence. This will lead to more referrals, probably resulting in a lower validation rate, but a higher number of actual interventions.

TABLE 4

## Injections per 100 office visits

Most Common Injections	1975				1976			
	1st Half		2nd Half		1st Half		2nd Half	
	Rate	Number	Rate	Number	Rate	Number	Rate	Number
90750 Unspecified Therapeutic	3.09	1408	1.69	887	1.54	926	1.28	643
90760 Steroids	1.20	546	.80	417	.82	493	.64	320
90762 ACTH	.26	119	.13	70	.12	73	.14	68
90776 Gamma Globulin	.80	365	.79	416	.92	554	.32	162
90778 Penicillin	15.19	6931	8.80	4609	10.00	6005	6.59	3323
90780 Other Antibiotic	1.84	841	1.65	863	1.52	911	1.06	533
TOTAL	22.38	10210	13.86	7262	14.92	8962	10.03	5049
Number of Office Visits	45,640*		52,391		60,126		50,420	
Change from 1st half 1975	-0-		-38.1%		-33.3%		-55.2%	
Change from 2nd half 1976	n/a		-0-		+7.6%		-27.6%	

\*See attached note

Note to Table 4, Injections per 100 office visits:

An attempt has been made to explain the low office count in relation to injections for the first half of 1975 out of a concern that the injection rate might be overstated. No satisfactory explanations were found.

One would expect the relationship between office visit counts for the first and second halves of 1975 to be similar to that for 1976, which would require the actual count of office visits for early 1975 to be above 60,000. However, the reported ratio of visits to total line-items for early 1975 is consistent with that for other periods.

The hypothesis that the implementation of MMIS substantially increased the likelihood that a given claim would find its way to UPRO, explains the low reported counts for line-items and office visits; however, since there is no reason to suspect that the pre-MMIS system reported a greater proportion of one type of service to PACE than others, an under-reporting of claims data would not have distorted the actual injection rate significantly.

While it is true that data coding and entry switched from OSI to the State in July 1975, no changes to coding or entry procedures have been identified that were of sufficient magnitude to have caused the anomaly.

Thus, in the absence of an explanation to the contrary, one must assume the rate of injections for early 1975 to be



reliable even though the number of office visits reported seems small.

### Cost

UPRO's contract with the State for PACE operations costs approximately \$6.50 per Medicaid client annually. The only additional costs associated with PACE are those required for State monitoring and supervision, for MMIS-PACE interface tape production, and for evaluation. Physician review, which is the objective of the service UPRO provides, is only 32 cents per enrollee annually but cannot occur without the support structure the other \$6 plus provides. As a percentage of total Medicaid expenditures for the claim types reviewed, the PACE contract amounted to 5.3% of the \$7,000,000 spent in 1976.

### Conclusions

The UPRO PACE program represents a unique approach in the field of utilization review. A State government has contracted with a private professional review organization for a review program directed by the physician leadership of the State. The contractor assumes all responsibility for evaluation of ambulatory medical care and for communicating and interacting with the physician community regarding its findings and recommendations.

The review is clinically oriented. The focus is on the examination of episodes in the care of individual patients to identify unusual practices. The approach

is based on a philosophy that the critical opportunities for achieving positive benefits for patients and the citizenry in general arise from quality-of-care issues, not from utilization issues per se. For the most part, the latter will solve themselves if the questions of appropriateness are answered successfully.

The program not only involves a method of exception detection, using clinical guidelines rather than statistical norms to measure variation, but also includes a procedure for evaluating those exceptional situations, which takes full advantage of physician expertise. In addition, a variety of courses of action are available to reviewers in their effort to improve ambulatory care which respect the professional responsibility of their peers and which provide incentives for voluntary response before they are faced with payment sanctions.

PACE represents a bridge in medical care review between administrative approaches and internal quality assurance programs. It operates on the assumption that others will deal with program policy issues (eligibility and benefits). Further, though it has some capability to detect and report potential fraud, it incorporates no investigative element. Because claims data provide only the outlines of medical care, PACE leaves to internal quality assurance programs the responsibility for matters

such as whether lab results are followed up. Nevertheless, the definition of what PACE doesn't do should not result in an inference that it has limited power. PACE in Utah has provided more information about ambulatory care delivery than has ever been available. It has enabled the USMA's Academy for Continuing Medical Education to function in ambulatory care, it has given the State Medicaid agency more to deal with in the way of significant program and patient utilization issues than it has been able to handle; it has provided the Protective Services office with a large volume of information regarding suspected child abuse cases to investigate; and it has resulted in a level and kind of dialogue on ambulatory care issues within the medical community that has no precedent.

The impressions of physicians and staff associated with the program and the objective data which have been gathered to date regarding improvements in care associated with PACE interventions support the conclusion that the effect of PACE is significant and in the right direction.

The enthusiasm of physicians and other consultants knowledgeable about the program is high. The leadership of the medical profession as well as of the State Medicaid Agency continue to be supportive and committed. The rank and file physicians see the program as responsible

and well-executed, despite occasional disagreement with the impositions of peer review.

Perhaps the most important conclusion to date is that each step in the development and implementation of the PACE approach has proven its potential and flexibility as a review tool. Many options are as yet untried. This ability to respond to the needs of reviewers represents an important aspect of its appeal to the profession. The program is designed to foster an individualized response to aberrations in medical care delivery and avoids the temptation to overreact to the visible but extreme case by the use of objective screening guidelines and the emphasis on patterns of care. Being able to respond differentially to a wide variety of issues and circumstances, the program transcends the need to be prematurely punitive or regulatory.

To date, PACE has not been implemented in a large-volume setting or with other data bases than Medicaid. Further, though it shares a common data base with S/UR, the linkage with that system or others is yet but an opportunity for future exploration. These areas will teach us more about the PACE approach and will bring about further evolution.

Finally, it must be emphasized again that the key to the success thus far of the PACE program lies in the



fact that it is physician-directed. UPRO's experience is both that medical professionals will review their peers responsibly if given the tools to do so and that providers do respond to constructive encouragement to change. The societal assignment of the responsibility for medical review should clearly acknowledge review as an essential element of the profession of medicine.

Both the PACE module and the related approach to ambulatory peer review are in the public domain and may represent the best composite of medical, administrative, and systems thinking done to date. PACE is an important resource, the use of which must be expanded, explored and applied elsewhere.

PSRO MONITORING

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Have you ever looked through a key hole, a crack in the fence, a knot hole, a hole in the wall, or those peep holes in your entrance door? Isn't it amazing what you can see through such tiny holes? Through those tiny holes you are able to recognize, to relate, and to identify entities far greater than the size of the hole through which they were viewed. There is a scientific name for this phenomenon but for the purposes of this presentation it is called PSRO Monitoring .....a key hole concept of management.

Our base line data source, Treatment Analysis Class Profile, was tested for adaptation to key hole viewing. These profile documents contain 3084 diagnoses broken down into surgical and non-surgical (with five age groupings in each surgery related category). These data elements, multiplied by the 210 PSRO hospitals to be monitored, created a universe of statistics in excess of 6,000,000 pieces of data which could be generated and hence, monitored. It would compare to looking into the sky on a clear night.....a myriad of indiscernible stars. The data was dispersed throughout the statistical universe and ranged upward from 0 to 25,000 recipients in all data cells. A total concept was discarded. A more down-to-earth approach was in order.

The plan had to be limited and the most limiting of the limiting factors was personnel resources. PSRO monitoring was just another function that had to fit into and become a part of the whole S/UR picture. The major LIMFAC had to be to control the approach to the problem.

We had to find a key to fit our key hole. It had to be small, representative, intensely active, reflective, significant, defensible and workable. Since we were dealing with lengths of stay for recipients, the plan had to be keyed to people and diseases. We were dealing with 700,000 (approx.) recipients and 3000 (approx.) diagnoses. So, we went the diagnoses route....the lesser of two statistics. Both would have reduced to the same ultimate conclusion.

What diagnoses should we capture? The Commission on Professional and Hospital Activities Study "Length of Stay in PAS Hospitals by Diagnosis, United States, 1975" listed diagnosis groups by rank by region of the U.S. We could have selected from these top ranking diagnoses or develop our own. We elected to run our own State of Ohio ranking and test against the PAS. So we leafed through the Treatment Analysis Class Profiles and ranked our 3000 diagnoses against 122,000 recipients who had hospital discharges in the past year.



What were we looking for? We wanted the largest concentration of recipients within an intensely active diagnostic field. Specifically, we wanted to know which diagnoses had an exceptional number of recipients, and how these exceptional numbers of recipients could be reduced to the lowest number of diagnoses and still retain an intensity that would reflect PSRO effectiveness vis-a-vis hospital length of stay.

What did we find? We went into the profiles with the aim of selecting diagnoses with patient activity of 100 or more during the past year. The results were both surprising and significant. We found:

1. 176 diagnoses related to 76,000 recipients by 100 or more occurrences in a hospital environment....or, 6% of the diagnoses captured 63% of the recipients hospitalized during the past year.
2. 684 diagnoses had no record of any activity.
3. The remainder of the data elements were so scattered throughout the diagnostic universe that they did not present a frequency pattern of sufficient stability to pass a significance test.

We assumed that an occurrence which repeated itself 200 times within one year should make a more stable base for computing average lengths of stays per diagnosis. We

tested occurrence rates between 100 and 500 and found that the highest ratio of recipients per diagnosis was at the 500 frequency level. At this level we had 30 diagnoses related to 46,000 recipients....or 1% of the diagnoses captured 38% of the recipients hospitalized during the past year. The frequency range was 500 through 25,000 hospital cases per diagnosis. The ratio was 1533 recipients to 1 diagnosis (average). This relationship captured 75% of "significant hospital activity" within 1% of the recorded diagnoses. These diagnoses became our key hole and were labeled "Top Thirty." Our next step was to relate our top thirty to the Professional Activity Studies (PAS) to establish a level of credibility that the PSRO would accept.

Categorically, we matched within 85% in the north central region which includes Ohio. That match was by ranking, i.e., 1 through 30. The real test was yet to come. How did we match based on average length of hospital stays? The first attempt to match failed. Our statistics were not common. The PAS contained single and multiple diagnoses shred-outs. Our averages did not make this distinction and would only match at the 64% level within a less than three-day margin.

Since we would not upgrade our data to match the PAS, and a match at a higher confidence level was essential if the plan were to survive, we chose another course

of action. This was to monitor on diagnoses by total recipients vs. total days without regard for single or multiple diagnoses, age groups, surgical or non-surgical, or any other outside influences on the averages. Simply stated, we wanted an average of averages into one representative average that matched the PAS. The PAS had it computed; we computed ours; and we matched at 86% within a two-day margin. We now had our key hole of 30 diagnoses and what remained was to determine what we wanted to see at the other side (of the key hole).

Since the plan was titled "A Proposed Plan to Monitor Integrity and Effectiveness of PSRO Performance during Conditional and Operational Phases of Implementation," we chose to monitor effectiveness since integrity involved morality....a measure not captured in the computer.

We asked for and received three simple computer programs. Two of the programs being developed will provide trend data; the other will retrieve hospital vouchers for medical necessity reviews when extended hospital stays reach the 75th and 90th percentiles. If PSRO hospital stays remain at the median or norm, this program will generate no output.

The trend programs will show (1) quarterly increases and decreases in lengths of stay for all (3000+) diagnoses, (2) monthly increases and decreases for the top

30 diagnoses only and will display this data by hospitals in the PSRO program. Information from these two programs will be compared to base line averages established when PSRO hospitals were granted "conditional status."

The third program expresses the top thirty diagnoses as whole days of stay. These whole days of stay were average stays computed by the State's MMIS and were rounded to a whole day. When PSRO hospitals exceed these whole day averages (normally at the 75th or 90th percentile) the computer flags the hospital claim for subsequent retrieval and review by the S/UR team. This only occurs on the top ranking diagnoses.

These simple basic statistics on 210 hospitals and 30 diagnoses meet the Federal requirements for low-key monitoring by small samples. Other restrictions to monitoring, i.e., "PSRO decisions are final;" "No case-by-case monitoring;" "No duplication of function;" "No hospital contacts;" etc. can be met by direct presentation of basic data to the PSRO. In effect, the State's approach to monitoring provides a service to the PSRO. The proposed Ohio plan provides a valid data base which will support useful comments to the PSRO. The data displayed by the computer programs, coupled to the State's hospital claim retrieval process, can



identify by attending physician, hospital, diagnosis, PSRO area, etc. and then relate these identifiable sources to possible questionable activity in the area of extended hospital stay.

The Ohio draft plan meets all known Federal restrictions. It assures the State an active role in PSRO evaluations. The plan is simple, adjustable, workable, and effective. It is a helpful management tool for the State and the PSRO. The cost is low. The personnel requirements compliment the cost. I hope it will be a valuable guide to you. Are there any questions?

UTAH LONG TERM CARE SURVEILLANCE  
AND UTILIZATION REVIEW PROGRAM

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The Utah Long Term Care Surveillance and Utilization Review (LTC S/UR) was developed as a complement to the Utah Long-Term-Care Payments System. The payments system itself is a method of reimbursement for long term care patients based on the cost of services actually rendered. This payment is coordinated with Title XIX certification, independent professional review, and medical review for compliance and quality of care surveillance on a statewide base.

The Utah LTC S/UR serves as a surveillance and utilization review tool for the payments system. It is a retrospective, exception report-based technique; has a data base of 247 separate data items; is coupled with an independent professional and medical review program; and uses a client peer grouping technique to generate provider/client exception.

The data base for the S/UR system comes from two major sources: provider claims and the professional medical review program. These two sources serve to create the profiles (client data sheets, summary profile reports, Forms 5 and 10) of Utah LTC recipients.

The provider claims data is utilized in the Utah MMIS S/UR systems. These generate client exceptions and complete client data sheets. It is combined with the medical review data in the Utah LTC S/UR system. The medical review program generates patient care profiles,

(Forms 5 and 10). These are coupled with the provider claim data to generate reasonable peer grouping. Provider/client exceptions, summary profile reports, and hard copy patient profiles (Forms 5 and 10) are the products of these operations.

These two interrelated S/UR approaches produce recipient profiles with separate and complementary uses. This approach allows for cross checks in the following areas: pharmacy, physician services, condition of patient, need or justification for further investigation (fraudulent practices, over and under utilization, or quality of care problems), and assists medical review in its operation (monitoring quality of patient care).

In order for the Utah LTC S/UR to operate properly, criteria for the peer group determination is receiving careful consideration.

The LTC S/UR presently has the capability of peer groupings based on the following criteria:

- A. Level of care determination
- B. Diagnosis of patient
- C. Type of facility (free standing nursing home or other type of LTC facility)
- D. Geographic location of provider facility
- E. Size of provider facility

The first three items listed are currently used. These data items come from the patient care profiles.



called Forms 5 and 10.

The Patient Care Profile, Form 10, is a four-page form completed by the nursing home for each new Title XIX admission. This is the basic input document into the system for payment of services. It is updated by the nursing home whenever there is a change in the patient's physical, mental, or emotional condition which would indicate that services and/or treatments are being increased which could affect the rate of reimbursement for that patient.

The Form 10 is originated by the facility upon a new admission to the facility of a Title XIX patient, approved eligibility for a Medicaid patient, a change in services provided which would affect payments, a change in level of care, and the 30-60-90 day evaluations.

The Form 10 is submitted to the Bureau of Medical Review Services to determine level of care, appropriateness of services, and authorization of specific services for incremental payments. These decisions are made jointly by the physician and nurse as they review each Form 10. Form 10 submissions on the 30-60-90 day evaluations are handled by clerical staff. Additionally, the Review Team determines the effective and expiration dates of approved services until members of the team can make a further evaluation for continued incremental payments

based on a more detailed review of the patient's condition.

This more detailed review is provided by the Form 5. This form is completed by the Review Team during their semi-annual (SNF) and annual (ICF) visits to the nursing homes in the state.

For these visits, the nurse and physician are augmented by a medical recorder to transcribe basic identification and drug usage information and a social worker to determine the social needs of the patient. For reviews of mentally retarded and psychiatric patients, a psychiatrist also accompanies the team to the facility. The services of a registered pharmacist are also available for consultation purposes.

The physician reviews each patient's chart to determine the diagnosis relevant to the patient's admission to and continued need to be in the facility. He lists the relevant diagnoses and correlates these with the medications the patient is receiving.

The Review Team nurse, in consultation with the facility nursing staff, completes the Form 5. Each question is answered and frequent checks are made to the index and patient's chart to verify or substantiate the answers recorded. This process takes approximately 15 to 20 minutes per patient.

Following the review of each Title XIX patient in

the facility, the nurse and physician tour the nursing home to see each patient. This visual contact with the patient is the final key in the total evaluation of the patient.

The data from the Form 10 and Form 5 is submitted to the computer with revised effective and expiration dates (incremental payments areas) and updates the current Form 10 or Form 5.

A major change in the review process has been the reformulation of the method by which the Review Team reviews patients. In the past this has been done on a team basis. With the new demands for increased information required by the Form 5, the teams now go into the nursing homes by function instead of by teams (Attachment E). For example, the social worker now has a separate sheet, Form 5 - Part II, which he completes independently of the other members of the Review Team.

An important spin-off of the forms development has been the concept of the Form 10 functioning as the Plan of Care document in the nursing home. This, coupled with the revamped Cardex, will help nursing homes meet the new Federal requirements (admission justification, plan of care documentation, and review of cases), provide greater documentation as to individual patient care, and reduce the amount of duplicative paperwork required of the nursing staff.

USING PATIENT DRUG PROFILES:  
A NEW FORMAT FOR RELEVANT CONTINUING EDUCATION  
PROGRAMMING FOR PHARMACISTS

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## INTRODUCTION

A myriad of approaches to continuing education have emerged as more states begin requiring continuing education credit for pharmacist re-licensure. Although approved courses comply with the letter of the law, some programs fall short of fulfilling the spirit in which these laws were written. As pharmacy continues to redefine and reassert its expanded role in health care, the scope and substance of continuing education programs will reflect the sincerity of commitment this profession is making toward elevating its position on the health care team.

One major shortcoming of many States' approved continuing education programs can be characterized as being a lack of program relevancy to the community pharmacist. This problem of relevance presents a major obstacle to the successful design of any continuing education program for pharmacists. Obviously, those subjects having the greatest relevancy to the community pharmacist are those relating directly to their practice, or to the patients for whom they provide services. Problems concerning drug use among familiar patients create both a captive audience and present a realistic opportunity for increased professional involvement in patient care. A continuing education program which provides pharmacists with exposure to new therapeutic and pharmacologic principles while providing an opportunity for them to relate to their own

patients can result in an effective and potentially productive experience.

In September of 1975, the administrator of Florida's Title XIX Drug Program, through its Professional Services Department, initiated a series of day-long continuing education seminars throughout the State of Florida. The objective of these seminars was to enable the community pharmacist to receive continuing education credit, in part, for reviewing drug profiles of their own Medicaid patients. To measure the pharmacists' responses to this approach to continuing education programming, a questionnaire was designed to evaluate both the program format as well as the potential for increased professional involvement as the result of drug profile review.

#### FORMAT DESIGN

Four cities in Florida, identified as having large Medicaid populations, as well as being centrally located, were chosen as sites for the continuing education seminars. Sixty days prior to each seminar, pharmacists were sent registration forms and requested to register a minimum of fifteen days prior to the seminar. In addition to pre-registration, each pharmacist was asked to submit the Medicaid identification numbers of twenty-five of their Medicaid patients. The fifteen day minimum pre-registration provided sufficient time to generate six-month drug profiles on each of the pharmacist's twenty-five Medicaid

patients.

Each continuing education seminar was divided into four sessions. The first session consisted of presentations by medical authorities on subjects relating to current practices in drug therapy. These presentations were designed to update the pharmacist on current norms and most common drug complications of therapies. Information presented during this morning session was designed to be used as guidelines by the participant pharmacist during the afternoon profile review session.

The second session was primarily devoted to familiarizing the pharmacist with profile review procedures, as well as providing an introduction to basic review criteria, through a discussion of several sample profiles. These sample profiles were reviewed by pharmacist members of the local Drug Utilization Review Committee. For many pharmacists attending these seminars, this was their first encounter with computerized patient drug profiles, and a comprehensive familiarization with format design and criteria application was essential for the reviewing session to be valuable.

To assist in the identification of potential cases of overutilization, physician shopping, extended use of hazardous medication, adverse reactions, and treatment of iatrogenic disorders, a simple procedure of profile review was presented during the seminar. Overutilization, for



example, could be detected by noting quantities of drugs versus estimated days supply and time lapse between dates of service. Physician shopping was characterized by the appearance of multiple physician identification numbers within one therapeutic class, or within therapeutically similar or contra-indicated therapeutic classes. It was also pointed out to pharmacists that potential iatrogenic complications may be detected by observing initial use of one medication (i.e. reserpine) followed by a subsequent initiation of drug therapy (i.e. antidepressants) whose action counters possible adverse effects of the initial therapy.

The third session was devoted entirely to an independent review by the participating pharmacists of their own patient drug profiles. Both physician and pharmacist members of the local Drug Utilization Review Committee were available for consultation and assistance on a one-to-one basis. Pharmacists were asked to review each profile looking for those which exceed established norms, or represent irrational use of medications as previously described. Pharmacists identifying serious irregularities were asked to isolate those profiles and present them during the fourth session's workshop. This workshop session provided pharmacists with an opportunity to present markedly atypical profiles for discussion.



## PROGRAM EVALUATION

A total of 320 pharmacists attended the four continuing education seminars, the majority of whom had been in community practice for over fifteen years (see Table II). A total of 289 evaluation questionnaires were submitted representing approximately a 90% response.

To evaluate the specific benefit of patient drug profile review and the educational impact of the seminar, four questions on the evaluation questionnaire were selected for study (see Table I). Pharmacists' responses to these four questions were compared on an overall basis and by groups based on length of time in practice. Table II identifies the grouping of pharmacists by length of time in practice and number of pharmacists submitting evaluations in each group. The program was designed to be relevant to pharmacists irrespective of length of time in practice. Differences in evaluation ratings between these groups would indicate that length of time in practice altered the pharmacist's viewpoint as to the programs' relevance.

### QUESTION A - VALUE OF PROFILE REVIEW

This question was evaluated on a scale of 1 to 5, where a rating of 5 represented a feeling on the part of the pharmacist that having an opportunity to review his own patient's drug profile was a very valuable experience. A rating of 1 would indicate the pharmacist felt this

experience of no value.

Overall, the pharmacists rated the opportunity to review their own patient's drug profiles at 4.16. When evaluating responses, by length of time in practice, Groups I, III, and IV were relatively consistent in rating profile review as a valuable experience at 4.40, 4.23, and 4.23 respectively with no significant difference between ratings. Interestingly, the Group II pharmacists' ratings of their evaluation of profile review fell markedly below those in Group I, III, and IV.

QUESTION B - PROFILE REVIEW AND POTENTIAL SERVICE TO  
PATIENT

This question was designed to evaluate whether after having reviewed patient drug profiles the pharmacist could provide a service to those patients exhibiting atypical utilization patterns to improve or correct a problem detected during the reviewing session. On a 5 point scale, the pharmacist was asked to indicate the frequency of instances where a situation existed that would lend itself to a valuable patient follow-up.

The overall evaluation relating profile review to potential for patient service was 3.04 representing an average of 10 out of every 25 profiles reviewed displayed a pattern that warranted patient follow-up by the pharmacist. As in Question A, pharmacists in Group I, III, and IV evaluated this question similarly and Group II's rating

fell markedly below the average of the other groups.

It was noted that profile review evaluation ratings relating to the potential for patient service, gradually decline as the length of time in practice increases.

Although this decline is noticeable, there was no significant difference between the rating to this question given by Group I or Group IV.

#### QUESTION C - PROFILE REVIEW AND POTENTIAL SERVICE TO PHYSICIANS

The evaluation scale for this question was similar to that used in Question B except that the profile is reviewed relative to potential service to physicians. The overall rating to this question, 2.60 was significantly lower than the rating for potential service to patients. For Groups I, III, and IV the individual group rating paralleled that of the overall average. Group II, however, demonstrated a significant increase of potential physician service over potential patient service. Although this group displayed an increase in ratings between Question B and C the rating for Question C was still significantly below the average of Groups I, III, and IV. There was no significant difference between rating achieved in Groups I, III, and IV. On the average, six out of the twenty-five profiles reviewed during this program warrant a physician follow-up.

#### QUESTION D - OVERALL EDUCATIONAL BENEFIT OF PROGRAM

Both, the overall average rating to this question as well as the individual group ratings indicated that this program design for continuing education seminars results in a very beneficial educational experience. An average of 4.4 on a 5 point scale, was achieved on all four seminars with a 4.65 rating maximum for the Tampa seminar.

#### CONCLUSION

Based on the results of the seminar evaluation pharmacists rated the overall educational experience of these programs as being very valuable (4.4 on a 5 point scale). Comments included by pharmacists on their evaluation forms, consistently stated that this approach to continuing education produced one of the more valuable programs that they had ever attended.

The potential value of pharmacists reviewing their own patient's drug profiles, was rated at 4.02 on a 5 point scale. It is not clear why Group II pharmacists, those whose length of time of practice fell between 6 and 10 years, rated this experience significantly below the average rating for this question.

Comparison responses to question B and C revealed that pharmacists felt profile review during the seminars provided a higher potential for service to patients than to physicians. The inconsistency of Group II's rating



when compared to Groups I, III, and IV on these two questions is unclear. In each group studied, and overall, pharmacists felt that reviewing their patient's drug profile did provide an opportunity, in at least 30% of the profiles reviewed, for potentially providing a professional service directed towards improving or correcting their patient's drug utilization pattern.

## DISCUSSION

Community pharmacy practice, in general, provides little opportunity and incentive for pharmacists to become involved in the drug therapy management of their patients. As third-party payors, however, continue to increase their scope of coverage to include drug benefits, the problems involving lack of opportunities and incentives for community pharmacist involvement in therapy management begin to diminish.

Overcoming the problem of lack of opportunity for involvement relies principally on pharmacist access to patient drug profiles. Computerized drug claims processing provides a relatively easy, and low-cost access to patient drug profiles. Data, commonly collected on third-party drug claim forms, can provide a reasonable comprehensive patient drug use profile, as a by-product of the claims payment process.

The problem of providing pharmacists with incentives for participating in drug utilization review, requires

development of remuneration which is both beneficial and needed. Obviously, monetary incentives, although both beneficial and needed, will be difficult to secure due to the lack of evidence relating this activity's cost-effectiveness. There are however, substantial requirements for pharmacy relicensure which involve continuing education credit by most States. It appears consistent, therefore, that with the increasing ease by which patient drug use profiles can be generated within the third-party sector, the well documented value of ongoing drug utilization review, and the increasing post-graduate education requirements for pharmacists to be relicensure, the opportunity and incentive requirements for pharmacist involvement in drug therapy management can be fulfilled.

The responsiveness of community pharmacists to this rationalization was the theme of this study. Whether pharmacists, provided with easy access to patient drug profiles, within the incentive environment of continuing education credit, would recognize this as an opportunity for increased professional involvement in their patients drug therapy management was of key consideration in evaluating the success of this format for continuing education programming. Clearly, from the evaluation of over 300 community pharmacist responses to this opportunity to observe and respond to their patients' drug use patterns

demonstrates that pharmacists value this opportunity. Emphasis on relevancy (as provided by patient drug use profiles) in continuing education programs can result in both valuable as well as, potentially productive (relative to patient quality of care) educational experience for community pharmacists.

TABLE I

QUESTION A: HOW WOULD YOU EVALUATE HAVING AN OPPORTUNITY  
TO REVIEW YOUR OWN PATIENTS' DRUG PROFILES?

QUESTION B: DID YOU FIND ANY PATTERNS OF DRUG USE AMONG  
YOUR PATIENTS' PROFILES FOR WHICH YOU MIGHT  
PROVIDE A CORRECTIVE SERVICE TO THE PATIENT?

QUESTION C: DID YOU FIND ANY PATTERNS OF DRUG USE AMONG  
YOUR PATIENTS' PROFILES FOR WHICH YOU MIGHT  
PROVIDE A CORRECTIVE SERVICE TO THE PHYSICIAN?

QUESTION D: HOW WOULD YOU RATE THE OVERALL EDUCATIONAL  
BENEFIT OF THIS CONTINUING EDUCATION SEMINAR?



TABLE II

<u>GROUP</u>	<u>YEARS IN PRACTICE</u>	<u>NUMBER OF PHARMACISTS</u>
1	LESS THAN 5	62
2	6 - 10	43
3	11 - 15	39
4	GREATER THAN 15	145

USING PHYSICIAN PRESCRIBING PROFILES:  
AN EDUCATIONAL APPLICATION

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Current concern for the alarming rise in health care costs has prompted much effort in fraud and abuse detection. Patient and provider profiles have been utilized primarily for these efforts. Fraud and abuse, however, accounts for only a small percentage of needless spending. A greater percentage of waste can be attributed to inappropriate medical care services, such as the wrong drug, the unneeded laboratory test, the excessive use of tranquilizers, the iatrogenic disorder. There are many factors associated with the inappropriate use of medical services: patient demands, incomplete patient information; physician habit.

Patient and provider profiles can be used as a tool, an educational device, for effecting behavioral change. Providers are often not aware of their "pattern of practice". They do not realize that by prescribing a tranquilizer for this or that patient, half of their patients are receiving tranquilizers. The physician, at times, does not know that his patient is being treated by other physicians with duplicative or contraindicated therapy. The patient and provider profile presents an opportunity for the health care professional to identify potential problems and use this information to improve the quality of his patient's care, and eliminate costly waste.

A program was designed in Florida, within the Medicaid Title XIX Drug Program, to provide physicians with their prescribing profiles and current drug information. The top 300 Medicaid physicians, as determined by a high to low list, were visited by clinical pharmacists, on a bi-monthly basis for a period of eighteen months. The physicians' profiles were formatted both in recipient order by date of service, showing all drugs received, and by therapeutic classes. The pharmacist would review the physician's prescribing profile with him, pointing out areas of potential therapeutic problems. These "Medicaid" physicians were frequently solo practitioners who were overworked, and whose patient information was contained within hundreds of medical records. They valued the ease with which their practice could be summarized. The physicians were then able to clearly see what their "patterns of practice" actually were. Although the clinical pharmacists who met with the physicians were able to answer drug therapy questions, more involved literature searches were conducted in the physician's office by portable computer terminal hook-up to the National Library of Medicine's Medline System.

The physicians' receptivity to this service was overwhelmingly favorable. They welcomed the opportunity to view their own prescribing patterns and receive cost



and therapy information. A preliminary study was conducted to measure the impact of this program on a physician's prescribing pattern. Profiles, generated by date of service, were compared before and after a visit. Initial results demonstrated a decrease in prescribing of certain classes of drugs. This demonstrated that physicians indeed were responsive to receiving their own prescribing profiles and actually effected changes in their practice when provided with this information.

FACTORS ASSOCIATED WITH THE  
SUCCESSFUL IMPLEMENTATION OF S/UR

Dan Boyle  
IMM  
Medicaid Bureau

## SUMMARY

The following are factors that have, in the past, proven to be critical in determining the success of S/UR units:

1. Early development of a definite S/UR strategy:  
S/UR is not simply a computer system--it is an activity which is carried on by State personnel with automated assistance. What these people will do and how they will do it should be determined before the set-up of the system is begun; it should be part of the systems planning.
2. Acceptance of S/UR by medical and healing arts professionals and their associations: It should be recognized that the prosecution of fraud and abuse is a difficult matter, that a good deal of the misutilization detected will not be clearly fraud or program abuse, and the majority of corrective action will be informal. The cooperation of the State medical society and other professional associations in cooperating with the efforts of the S/UR unit or even, in the ideal case, aiding in the imposition of corrective measures is critical.
3. Precise and well-understood Medicaid policies and procedures: The S/UR system, and in particular the edit system that generates the paid

claims tape from which S/UR works, cannot run on vague and subjective policies. The precision of statement of policy critically affects the edit system, and this in turn affects the operation of S/UR. On the side of corrective action and other sanctions, provider rights and the requirements of due process must be scrupulously respected. This, too, demands precision in policy.

4. Early and continuous involvement of Medicaid program and policy personnel in computer systems development efforts: S/UR exists for the Medicaid program, and not the program for S/UR. Although the computer system has its operating requirements, meeting them will not interfere with the actual use of the system if program and policy personnel are able to articulate their needs from the start of the planning effort.
5. Sound everyday working relationships and communication between S/UR users and data processing personnel: Correlative to the above, S/UR users have to understand the needs and operating situation of the systems staff. If there is mutual respect, communication, and an open exchange about problems, both sides can benefit and the actual work of S/UR can go ahead.



6. Adequate staff and organization including a commitment reaching to the agency director:  
From what has been said above, it should be obvious that nothing can be achieved with S/UR simply by turning the system on and letting it run. The effectiveness of the S/UR unit will depend on the analysis and investigations staff available, the resources that they can command, and the amount of leadership that is given to their efforts. By the same token, if the unique needs of the S/UR unit are not recognized and if it is not supported, the results are not likely to be impressive.
7. Orientation and training to assure thorough knowledge of the reporting concepts, organization, and content: This should be the most obvious point of all of these. The staff, the supervisors of the staff, and executive personnel who will be involved with the unit should all have an appropriate orientation to the operation of the system and the results produced so that policy planning and corrective actions can proceed from an accurate base.
8. Validation of reported data to discover program errors, including computer programming errors:  
As has been stressed many times, the production

of an exception does not mean that an instance of misutilization has occurred. It means that a statistical anomaly requiring investigation has been detected. The source of such an anomaly may be in the system itself. Validation of the data trail should be an ongoing activity, and checks should be made all through the processing flow to make sure that reported data are not produced as a result of system errors.

9. Well-understood and well-defined division of labor between S/UR and other forms of utilization control and review: Although S/UR is a potent tool, it is not the answer to all utilization control problems. This should be recognized, and the work parcelled out to the units which can handle it. It is just as bad to set the S/UR unit a problem that it is not equipped to deal with as to ignore its usefulness in the areas where it can serve as the premier control device.

FIELD INVESTIGATIONS IN OHIO

Bernice Koski  
Ohio Department of Public Welfare  
Columbus, Ohio

Ohio has a large Medicaid Program offering a wide range of covered services in 32 categories. These are some of the program characteristics:

1. Serves over 700,000 recipients
2. 32,000 providers enrolled
3. Expenditures of over \$500 million during the past calendar year.

Until July 1976, the S/UR staff consisted of four field specialists and ten analysts coming from a range of backgrounds. In spite of our small staff, we recorded over 400 field visits to both providers and recipients. In addition, we elected to concentrate on several major projects. I will summarize several of these successful field studies.

I. MEDICAL-FISCAL AUDIT of an inner-city medical center:

This pioneer audit effort covered eleven physicians in general practice, two radiologists, and a pharmacy as provider of prescribed drugs and medical supplies.

BACKGROUND

In the fifteen-month period of our study, we had paid these providers \$1,485,888. Our S/UR reports had shown the following types of exceptional activity:

1. 16% to 20% of all Rx filled were for cough and cold preparations. The norm for this type of practice (ADC & inner city) was 12% to 13% statewide.



2. The number of Rx per recipient was 3 times the average of other providers in similar settings.
3. The number of medical visits per recipient was 1 1/2 times greater than the peer average.
4. Radiology was 9 times the average of peers.
5. The number of injections per visit was 2 times the average.
6. There was apparent overutilization of medical supplies per recipient.

At the outset of this major project, undertaken after earnest educational efforts failed, we realized that a fiscal audit alone would not suffice. The medical center under review catered to welfare recipients and did bill their usual and customary fees. Hence, the issues revolved mainly around quality of care. With so many medical concerns, we chose to perform this medical-fiscal audit. The universe of 241,645 lines (paid claims) dictated a scientific statistical sampling technique.

#### ANALYSIS MADE

A stratified random sample was drawn, with items independently selected from separate sections of the field for various services. S/UR staff worked in teams in the field to collect the data from the patients' charts. The fact that the entire test operation had an objective and scientific basis made it possible for various bureau staff to participate independently in the same test and for the

results to be combined as though accomplished by one auditor.

The field audit revealed the following:

1. Questionable medical care.
2. Ping-ponging.
3. Apparent overutilization of radiology, such as:
  - a. Complete paranasal sinuses (3 views)
  - b. Skull series (4 views)almost routinely ordered for complaints of colds and headaches.
4. Abuse of medical visits that did not meet the criterion of medical necessity, such as visits to refill keri lotion.
5. Questionable prescribing habits.
6. Lack of freedom-of-choice in pharmacy.
7. Collision between pharmacy and physician.
8. 2 physicians seeing 183 patients in 3½ hours.
9. Billing clerks guessing on diagnosis submitted on the invoices, based on medication or tests ordered.
10. Ethical concern when the physician readily admitted that he wouldn't treat private pay patients with some services because he "would not bankrupt them".

We took monetary exceptions to all services that did not meet the criterion of medical necessity. The projected

result of this entire field effort is close to \$200,000.

## II. DRUG STUDY

This field effort was undertaken in cooperation with pharmaceutical consultants and district personnel. In one day we visited approximately 100 nursing homes in the five state districts. We selected a list of 10 common drugs and looked at medications to determine improper substitutions. The results identified approximately 35 pharmacies with billing discrepancies. One of the major results is the law suit filed recently in the U.S. District Court against one of the pharmacies for over \$70,000 plus a \$2,000 fine for each false claim. The key strategy employed in this field study was careful planning and the element of surprise.

## III. PODIATRY INVESTIGATIONS

Attention was drawn to the profiles of seven podiatrists in one major city. An analysis of all fees paid by ODPW to podiatrists in the calendar year revealed that the seven providers received (for medical services alone) 22% of the total podiatric budget, yet they represented only 2% of the active podiatrists in the Ohio Medicaid Program. In addition, we noted that five had noticeably escalated their prescriptions of orthotic devices. Two of the podiatrists charged a total of \$115.00 for each initial visit for welfare recipients. This seemingly obvious and expanding overutilization formed

the basis for initiating field examinations.

#### ACTIONS TAKEN

1. Field visits included re-examinations of recipients by our medical technical advisor.
2. Field visits were made to each of the providers to copy (Xerox) medical records and pick up X-rays.
3. Payment records were reviewed by desk audit or statistical sample.

#### RESULTS

1. Providers were found to be billing for 3 view X-rays when records showed only 2 views.
2. Recipients had not received expensive custom-made orthotics, but rather, a cheap stock item with a market value of less than \$3.00.
3. Providers had billed ODPW inflated codes, or for incompatible services, and for follow-up care in the 6-week post-op care period.
4. Monetary findings totaled \$70,000.
5. Recommendations were made for stricter policy on payments for orthotics, as well as proper billing instructions for independent and asterisk procedures.

I could go on and on describing our many field projects, but time does not permit me to do so.



We have launched several major new activities:

1. A hospital control unit
2. Recipient control unit
3. Six separate reviews of major vision-care providers, and
4. Investigation of a large pharmacy chain.

As each case unfolds and the field work progresses, we are constantly amazed by the fraud and abuse we uncover. In closing, I should like to add that while we have now increased our staff to 32 members, we know that we are still very understaffed. We are pleased with the MMIS reporting system that we have had in place since 1973--Ohio having been the pilot state for the nation.

FIELD INVESTIGATIONS IN MINNESOTA

Patricia Nelson  
Division of S/UR

My presentation on Minnesota SURS field investigations will include investigations of medical providers as well as investigations of medical assistance (Title XIX) recipients.

In a state with less than a population of 4 million, Minnesota has approximately 13,000 eligible medical providers and approximately 200,000 medical assistance recipients.

In relation to medical providers, a number of factors are involved in determining whether a field investigation is to be conducted, as well as the scheduling of field investigations. Some of these factors are:

1. The source and type of referral
2. SUR computer report on the provider
3. The geographical location of the provider
4. The existence of definitive Medical Assistance program policy for the provider category in relation to the type of potential provider abuse or fraud of the program.

Cases may be opened on providers referred from sources such as county welfare departments, providers, recipients, and other divisions or units of the Department of Public Welfare. In addition, cases may be opened on providers excepting on SUR computer reports, as well as on the basis of a monthly listing of the top five or ten providers by total dollars billed in each of the 36 provider

type categories.

Minnesota SURS has seven staff available for field investigations. Therefore, an attempt is made to schedule field investigations by geographical location of providers so that travel time is used to the best advantage and so that SURS has visibility in all areas of the state. Minnesota is a large state, about 500 miles north to south and as great as 400 miles east to west.

The provider SUR unit, consisting of four health professionals, is responsible for screening and opening provider cases as well as for the provider case analysis and determination of the necessity for, and type of, field investigation. Provider SUR staff are assigned cases based on expertise and interest in specific provider types. At least two SUR investigators conduct each field investigation. One team member is the health professional having the case responsibility and the other team member is either a professional investigator or a second health professional.

I will now discuss two specific cases involving field investigations which are typical of Minnesota SUR provider investigations. The first case involves a physician, a general practitioner, who had continuously excepted on one or both of the report items (1) ratio of pathology procedures per recipient, and (2) ratio of pathology procedures per visit on all SUR quarterly reports. This



physician typically serves approximately 70 to 95 medical assistance recipients each quarter and is reimbursed approximately \$9,000 to \$10,000 each quarter for services provided to these recipients.

The physician's ratio of pathology procedures to recipients was 14.36 and the ratio of pathology procedures to visits was 3.72 on one quarterly run.

Charts were made up based on exception reports illustrating the physician's laboratory practice as compared with all physicians, or the peer group of general practitioners. The physician's practice is illustrated by a diagonally lined bar; the upper limit is indicated by a horizontally lined bar, and the average for physicians is shown by an unlined bar. From April through June of 1975, the average for all physicians on report item ratio of pathology procedures to recipients was 1.23 while this physician's average was 10.58. Only 8 physicians in the state exceeded the upper limit of 8.75.

A provider detail was ordered and analysis of the physician's practice was begun by SUR health professionals. The detail only made more graphic the tremendous number of laboratory procedures provided to recipients at each visit. However, in-house analysis of the providers practice was seriously hampered because the provider was not submitting diagnostic information on invoices and therefore there are no treatment analysis reports on

this individual.

From the provider detail, a list of recipients whose medical records were to be examined was developed. An appointment to review records was established and after four weekly appointments 15 records had been examined in detail by health professionals. In this manner diagnostic information and laboratory test results were obtained from the physician in relation to each visit by the fifteen recipients. Following the first appointment, the physician had a notice in his reception room that no new medical assistance patients would be accepted for service, effective on the date of the first SURS audit of his medical records.

In addition to reviewing the medical records with the physician, one of SURS staff, a medical technologist, examined the physician's on-premise laboratory and questioned the laboratory technician about various procedures performed. Examples of some results and observations from the field investigation are as follows: (1) the services, primarily laboratory tests, provided by the physician generally were the same for all recipients regardless of age, diagnosis, or frequency of visits; (2) in addition, laboratory procedure results were generally always normal or high normal and the same, e.g., blood sugars on all recipients were reported as 90 mgm.%, all blood urea nitrogens and uric acids were both

10 mgm.% and urine sugars, and urine and urine cultures were all reported as normal.

The field investigation resulted in further in-house analysis and documentation of four areas of potential fraud.

1. Bacterial smears. There was no documentation of results in the physicians medical records although the procedure was billed and reimbursed. Also, investigators noted a thick layer of dust on the microscope stage.
2. Uric acid. While high normal results were recorded, the procedure was not performed. No chemicals were present in the physician's office to perform this test as determined during the field investigation.
3. Blood bilirubin. This procedure was not performed; the physician was doing urine bilirubin only, which is reimburseable at a lesser amount.
4. Complete routine urines. There was no documentation for the microscopic part of the urine in the medical records; physician performed only part of the urine test but billed and was reimbursed for the complete routine urine procedure.

During a 12 month period, reimbursement for services not performed, and the difference between the higher reimbursed tests from those the physician actually

performed, totalled approximately \$12,000.

This case was referred to the criminal division of the Attorney General's Office. Combined efforts by SURS and the Attorney General's Office resulted in an unannounced at-home interview of the laboratory technician for purposes of confirming the existence of probable cause for a search warrant for the physician's office. The search warrant was obtained the following morning and three SUR investigators, an investigator from the Attorney General's Office, a police detective, and a photographer from the State Bureau of Criminal Apprehension searched the physician's medical and business offices and seized various materials.

The photographer's role involved photographing the entire office and all laboratory equipment. During the search the physician became quite upset and struck the SURS Medical Technologist; the medical technologist opted not to file simple assault charges. We are now in the process of examining and analyzing all evidence seized. Time elapsed from initial analysis of the provider prior to field investigation through the time of the search was 6 months.

An additional note about this case is that in December 1976, the physician was sent copies of his exception reports and charts that you saw earlier. On following quarterly runs, the physician has not excepted on labora-



tory related report items.

The second case example involves a pharmacy. SURS review of exception reports indicated that the pharmacy, in question excepted on each quarterly run on average payment per prescription.

The provider SUR staff person, a registered nurse, assigned to the case prepared the materials for the field investigation following the general format of the draft Examiner's Guides published by HEW. This involved the random selection of 25 paid claims submitted by the provider. Copies of the invoices were obtained, a worksheet for each prescription was prepared, and a modified questionnaire similar to that in the draft Examiner's Guides was prepared. The pharmacy was given one day's notice by telephone that an audit would be conducted. Four SUR investigators completed the field investigation which involved examination of the 25 original prescriptions and refills, and comparison with invoices submitted and paid. The two pharmacist/owners were interviewed using the Minnesota version of the federal questionnaire. While verifying the original prescriptions, SUR investigators noticed the pharmacy had a large stock of generic drugs.

Investigators made a list of the generic drugs seen at the pharmacy. The pharmacists indicated they did not dispense these generics to medical assistance recipients.

The stock of generics, plus the fact that there appeared to be a difference between what was written on the prescription, what was filled, and what was billed to Title XIX, resulted in investigators stopping at a recipient's home to look at his medications. One prescription examined was for Ampicillin and contained a brand called Omnipen. The pharmacy had billed and been reimbursed, for Principen. By billing for Principen, the pharmacy had been reimbursed \$5.00 more than it would have been if it had billed for the Omnipen actually dispensed. After returning to St. Paul, in-house information was examined in view of the list of generic drugs made during the field investigation. It was noted the pharmacy never billed Title XIX for generic drugs.

A list of recipients and their addresses was developed, based on those receiving medications similar to the generics stocked at the pharmacy. After consultation and referral of the case to the Attorney General's Office, six SUR investigators spent ten days on the following field activities:

1. Investigators went to 50 recipients homes to examine their medications.
2. If the medications in the bottles differed from what was stated on the label, the label information was copied.
3. A meeting was held with the five local physicians

who wrote the original prescriptions to explain the pharmacist's practice of filling prescriptions with generics but billing and being reimbursed for name brand drugs. Based on SUR investigators copies of labels from recipients bottles of generic drugs, these physicians wrote new prescriptions.

4. The new prescriptions were taken on the closest pharmacy (25 miles away) to be filled with the appropriate name brand medication.
5. The new bottles were taken to the recipients and exchanged for their bottles of generics.
6. When the exchange was made with recipients, sufficient time was spent to adequately explain the reason for replacement of medications. A form was also signed by the recipient indicating agreement and consent with this procedure.

The SUR investigators collected 37 bottles of medications which contained generic drugs. A search warrant for the pharmacy was obtained a few days later, with the search and seizure of evidence completed by 2 SUR investigators with the local county sheriff. The evidence confirmed the drug substitutions.

Less than three weeks later the two pharmacist brothers pleaded guilty to submitting fraudulent claims to the Minnesota Department of Public Welfare. Also, the

pharmacists entered a plea of guilty to eight misdemeanor counts of mislabeling (theft) in relation to private customers. The sentence was deferred to a higher court.

The District Court Judge accepted the guilty pleas and placed the two pharmacy-owner brothers on probation for one year. While on probation the two pharmacists are to serve 30 days in the county jail, pay \$2,500 fines each and make full restitution to state and county welfare authorities. SUR analysis of the pharmacy detail indicated that the difference in reimbursement between the generic and name brand drugs identified was between \$6,000 to \$8,000. SUR staff gave the provider detail to the pharmacists for purposes of having them determine the actual restitution amount. The restitution was made in the amount of \$6,274.44. The case was then referred by SURS to the State Board of Pharmacy. Their actions involved suspension of the pharmacists' licenses, concurrently, for a three month period of time. The pharmacists will then be on probation for an additional 21 month period.

After their sentencing the pharmacists admitted that the day they were notified of the field audit by the SUR investigator; they stopped their practice of substitution. The pharmacist brothers also admitted that they made attempts to relabel the prescription bottles and replace the generic drugs with the name brand drugs while SUR investigators were in the town exchanging recipient's



prescription bottles.

While average payment per prescription does not initially seem to indicate abuse or fraud, particularly when a pharmacy had a monopoly in an area, Minnesota has found this report item to be a useful indicator in a number of cases.

To summarize provider field investigations, the Minnesota SUR Division's seven investigators (5 health professionals and 2 professional investigators) follow through with provider cases from initial case assignment, case analysis, field investigations, search and seizures, and determination of amount of restitution.

The investigative unit of Minnesota SURS has also been involved with a number of field investigations relating to medical assistance recipients.

A typical case involves a 28 year old male who is currently on probation and has been committed to a facility for the purpose of drug rehabilitation. He has an extensive criminal record.

In November 1976 a recipient SUR investigator had been contacted by a physician regarding this recipient's various claims of injuries and ailments for the purpose of obtaining prescriptions of controlled substances.

The SUR investigator initiated a review of the recipient's exception reports and medical claims history report and found that in the period from September 1975

to August 1, 1976 the recipient visited 54 prescribing physicians and dentists, and received 142 prescriptions from 63 different pharmacies.

The recipient attempted to obtain drugs that had narcotic-like bases, such as percodan, talwin, and codeine, and would specifically ask for percodan.

The SUR investigator, after obtaining the information from the computer readouts, initiated an investigation. This investigation involved interviewing and taking statements from five pharmacists, six physicians, and one dentist regarding the recipient's methods of obtaining controlled substances. The method of operation used by the recipient when he saw physicians and dentists was to claim a variety of ailments, which he was adept at feigning, and to ask for prescriptions that would help to relieve the alleged pain he was suffering. Frequently, this recipient called physicians on weekends complaining of pain. He would obtain drugs but would not keep his Monday morning appointments. In addition, he would state he lost his drugs or they were destroyed by accident in order to obtain more prescriptions. The recipient has traveled around the state to obtain emergency treatment and drugs in an attempt to avoid detection.

The statements of the various medical vendors and the SUR data was presented to the County District Court and a warrant for the arrest of the recipient was issued

under the felonious theft of welfare funds statute.

The recipient pleaded guilty to the charge of theft and was sentenced to five years in prison. The prison sentence was stayed contingent upon the recipient completing one year in a drug rehabilitation center, making restitution for the theft of welfare funds, and completing five years on probation.

AN OVERVIEW OF THE TEXAS  
RECIPIENT HEALTH CARE EDUCATION PROGRAM

Robert Tyndall  
Texas Department of Public Welfare



Under the Federally mandated Title XIX Program of the Social Security Act, the Texas State Department of Public Welfare as the Single State Agency is responsible for the administration and comprehensive health care of approximately 700,000 categorically eligible recipients within the Medicaid program.

In Texas, the public exerts a strong and dominating influence on the legislative and other governmental activities relating to monetary outlay. In recent years, this public has become increasingly concerned over the rising costs of Medicaid appropriations. Accountability to the public is therefore a fundamental responsibility of any government agency administering such a statutory program and it must, by whatever means, control the cost of necessary medical care without sacrificing the amount, duration or scope of such care.

Being aware of misutilization of medical services (provider and recipient), the Department through its utilization control mechanisms conducted a study of 456,986 individuals. Of these recipients, approximately 2% utilized 12% of the expenditures. In dollar amounts, the average was \$4,699 per person. The average expenditure for the other 98% was \$355 per person. Statistical data also indicated that the recipients in question lived within five major metropolitan areas of Texas and that the Category 2 recipients (Aid to Families with Dependent

Children) (AFDC), were the primary over-utilizers of medical services.

The Department, in response to these mounting concerns and upon the recommendation of the Texas Title XIX Medical Care Advisory Committee, with the approval of the Board of Welfare, established the Recipient Health Care Education Program, which was implemented on March 1, 1976. This pilot project is in operation in the five metropolitan areas of San Antonio, Dallas, Houston, Corpus Christi, and Fort Worth.

Simply stated, the objective of this project is to educate recipients of services, particularly those who excessively utilize non-essential medical services, to use their benefits wisely; and to enhance the utilization review of providers of services. Recipient and provider cases are dealt with individually. The recipient cases are handled through individual counseling by professional personnel within the Recipient Education Unit. Provider cases are referred to the appropriate organization (DPW, Peer Review, or Insuring Agent) for proper disposition.

Recipient misutilizers are selected in the State Office by the use of computerized screening parameters which include (a) number of doctor office visits; (b) number of out-patient hospital visits; (c) a combination of both a and b; (d) number of in-patient hospital stays; (e) use of multiple different physicians; and (f) usage

of an excess of a total dollar volume for services provided during the time period being examined. The medical recipient profile that is generated by the computer, is reviewed and analyzed by medical professional personnel in the Utilization Control Division, for evidence of medical necessity. Cases that reflect over-utilization patterns receive further analysis determining the extent of over-utilization and the need for enrollment into the Education Program. The selected recipient profiles are sent, at the appropriate time, to the Education field staff for use in the person-to-person counseling and evaluation performed by the Nurse/Social Worker counselor.

The field units of the Education Program are organized to function under the direction of the Medical Assistance Unit Physician-Program Director. This staff includes a Registered Nurse Supervisor, a Public Welfare Social Worker, a Community Service aide, and a Clerk Typist. Additional personnel are being added as necessary to meet the increasing work load of the units. Counseling with the recipient is provided only by the Registered Nurse or Social Worker.

The field units notify recipients by form letter of their selection to participate in the program. The recipient also receives an appointment letter that gives them a tentative appointment time with the education

counselor. The appointment letter confirms eligibility until the recipient's first visit.

On the initial visit, the counselor explains the nature of the program, assuring the recipient that the Department is not taking any necessary services away from the recipient, but wants to help the recipient to learn to utilize their health care services more effectively. The counselor reviews with the recipient their medical profile, the current explanation of benefits form, and allows the recipient to discuss any questions or problems that he/she may have. The counselor then makes the decision based upon his/her findings, on whether or not to enroll the recipient for further counseling.

Enrollees are required to make monthly visits to the Education Program office where they are counseled and are issued their Medical Care Identification Card and Monthly Medical Record Card, both of which are prominently stamped with the word "EDUCATION". Recipients receive monthly counseling until they (a) show adequate improvement in the utilization of services, (b) demonstrate medical necessity, (c) move from the project area, or (d) are denied eligibility.

Counseling/education by professional staff is the key element of the program. Areas of counseling involve appropriate utilization of medical services such as using one family doctor and depending upon him for



referrals, using the emergency room for emergency situations only, etc.

DESIRABLE FEATURES OF S/UR

William A. Flinn, Jr.  
Consultec, Inc.

## INTRODUCTION

A significant portion of this conference has already been dedicated to desirable features of SUR systems. In fact, several of the more interesting features which I feel should be a part of any SUR system have already been discussed in considerable detail. Since so much of the good material has already been used up and given rather severe time limitation, my presentation is more or less forced into a guide book format.

My list of desirable features is organized into three general areas: report content, exception reporting techniques, and management aids. I will describe each feature in terms of its essential characteristics, why you need it, and where you might go to get more information about it.

In preparing my remarks, I have tried to take a rather broad view as to what constitutes a SUR system. As a framework for discussion, I have assumed SUR to refer to any automated profile analysis type system which meets the general objectives of the MMIS General System Design, rather than to any particular implementation of that general design. I have, however, been asked to limit my recommendations to features which are practical for inclusion within existing SUR implementation approaches rather than postulating any fundamentally new design approaches, which, as a system designer, I would much

prefer to do. I have also limited my comments to the more significant system features, although there are obviously a number of relatively minor design features which can make your relationship with the computerized system much more satisfying. For coverage of these I would refer you to your own systems people.

## II. REPORT CONTENT

### A. Flexibility in Defining Report Content

The first SUR feature which I would recommend for your consideration is a high degree of flexibility in defining report content. In fact, flexibility is a desirable attribute for all aspects of a SUR system but, I feel, is most important with respect to report content. The need for flexibility arises out of several related factors:

1. First, there is little or no hard data available on the correlation between items of information contained in SUR profiles and the specific cases of fraud and abuse or medical misutilization which those information items are intended to reveal. The information content of SUR profiles is typically defined first on an intuitive basis and then subsequently refined based on what seems to produce the best results. This refinement process virtually demands a



high level of flexibility in defining report content.

2. However, even if we did at a given point in time, have explicit correlations between profile content and specific cases of fraud and abuse, we could not rely on the correlations remaining constant. Since it is apparent that we are dealing with some rather sophisticated and well organized Medicaid abusers, we should anticipate that whatever detection techniques are developed will be circumvented not long after they are put into use. Thus we must rely on system flexibility to stay at least one step ahead of the bad guys.

A significant degree of flexibility in defining profile report content is present in all existing SUR systems which were built upon the original Ohio SUR implementation. The basic approach to report content flexibility taken in Ohio type SUR implementation is to have the system develop a rather extensive matrix of summary type data on a routine basis, and to provide the user with a parameter driven facility with which to combine data from the summary matrix any way he wants so as to produce summary profile reports. In examining flexibility for profile reports, I would recommend that you look at more recent designs of Ohio type systems - Indiana or Illinois for example - since the technical approach employed results

in an operating cost which is about one third of the operating cost of earlier implementations.

In support of analysis of profile reports it is also important to provide for flexibility in the content of claim detail reports. For these reports, a sensitive selection capability is needed which not only allows ready access to all required detail information but also allows for the automatic exclusion from the reports of all of the detail which is not needed.

In addition to a facility for selecting claim details on individual providers and recipients, it is helpful to be able to directly select details for provider groups and recipient family units. With respect to a given provider it is also desirable to be able to directly select all claims filed on behalf of his recipients, regardless of who filed them. One final feature which should be considered with respect to claim detail reports is the ability to select an appropriate statistical sample of claims as a basis for audit or recoupment of erroneous payments.

All of these detail report facilities are present in the Illinois SUR design which contains the most sophisticated and flexible claim detail reporting facility of which I am aware.

## B. Provider Cross-Reference Information

Continuing under the heading of report content, a highly desirable SUR feature which is not very well addressed in the MMIS General System Design, is a facility to easily cross-reference between providers. Such a facility should produce information which will reveal referral activities, of whatever type, between different providers.

In recent years, a whole catalog of fraudulent and abusive activity exploiting improper interrelationships between providers has been documented. Some pertinent examples include so called "ping-ponging" of patients between practitioners and various kick-back schemes between clinics and labs, or nursing homes and pharmacies, in exchange for ordering unnecessary services.

The MMIS General System design only provided for cross-referencing between practitioners and the various other providers carrying out their orders or filling their prescriptions. This type of cross-referencing based on explicit professional referrals is done at a summary level only and is predicated on the availability of the identification number of any attending,

referring or prescribing physician on every claim filed.

There are at least three problems with this approach:

1. First, in addition to knowing that a provider is exhibiting unusual referral patterns, you also need to know what other providers are involved and to what extent.
2. Second, it only works for relationships where there is an attending, referring, or prescribing physician directly involved.
3. And third, it is often very difficult to get an accurate identification number on the claim form in the first place.

A more practical, although less precise, approach to developing provider cross-reference information is to identify different providers who file claims on behalf of a common recipient. An unusually high incidence of recipients in common between two providers indicates the potential for an abuse oriented interrelationship. This approach identifies all providers involved, it works for relationships between providers of any type, and it is not necessarily dependent on an accurate attending, referring, or prescribing physician number.

Two good examples where this approach is employed can be found in Utah and Illinois. In Utah the facility



is limited to long term care SUR while in Illinois all provider types are addressed.

### C. Treatment Analysis Information

The topic of treatment analysis was dealt with rather thoroughly earlier in the conference so I will touch on desirable features in this area at a summary level only. In general terms I would recommend that you consider all of the features exhibited by the Indiana treatment analysis design. There are, however, four major features of that design which I would like to briefly re-emphasize.

First, I would suggest that you equip yourselves with a facility to group diagnosis codes for purposes of treatment analysis reporting. Earlier SUR implementations did not provide a particularly useful diagnosis grouping facility and are, therefore, subject to significant data fragmentation problems. That is, beyond a few of the more popular diagnoses, there are usually not enough incidences of care to support a meaningful comparative analysis at the level of a five digit diagnosis code when you break your data down by patient age group, by whether or not surgery was performed, etc. A facility to group diagnoses into related categories, in a

manner similar to that employed by the PAS length of stay statistics, is very helpful in avoiding the fragmentation problem.

Second, a capability to analyze individual hospital stays against exception criteria seems to be a very useful feature. The MMIS General System Design bases its treatment analysis for hospitals on an average length of stay for each diagnosis classification. This approach is useful if you have enough data to make the average meaningful but, again, the data fragmentation phenomenon presents a problem. A facility to analyze individual hospital stays on the basis of externally derived criteria gets around the fragmentation problem and also provides a valuable additional perspective on hospital utilization patterns. In addition, such a facility provides one of several possible mechanisms to achieve the third treatment analysis feature I would recommend to you.

Third, an automated transfer of exception information from treatment analysis reports to summary profile reports facilitates the analysis of both sets of reports. Such an information transfer is of particular use for the profiles of institutional providers where an adjustment

of profile statistics for patient mix is extremely important. Treatment analysis gives you statistics adjusted for patient mix but they are broken up into lots of little pieces. So the idea is to put all of the little pieces together and fit them into the big picture summary profile report.

The final feature I would recommend for inclusion in treatment analysis is a series of ranking reports. It seems to be human nature to want to rank things, so you will always find yourself dealing with questions like:

1. What's your most popular diagnosis code?
2. Or procedure code?
3. Or what hospitals have the longest length of stay for a given diagnosis?
4. Or what physicians are the worst offenders in a problem hospital?

Inclusion of a facility to produce reports which answer these questions will at the very least make you popular with the statistics collectors.

#### D. Readability of Reports

Continuing under the heading of report content, I would like to touch briefly on the subject of readability of reports. In designing statistical reporting systems like SUR there is

an inevitable conflict between getting together on one piece of paper all of the information which you need to make a decision while at the same time making that information easy to read. Since English is not a very concise language, the goal of getting all of the facts together in one place is usually met by the introduction of all sorts of codes: diagnosis codes, procedure codes, drug codes, county codes, etc.

Some people seem to think well with coded information but the majority of us do our analytical type thinking with language. So, to avoid continual abuse by the language aficionados I would urge you to make maximum use of English translations on your SUR reports - particularly claim detail reports.

The Illinois SUR design makes rather liberal use of English subtitles as, it would seem, do several of the other SUR variants which I have heard described in the last few days.

#### E. Data Quality Control

The final feature I would like to suggest with respect to report content is a data quality control mechanism.

SUR systems are, by definition, dependent for almost all of their data upon claims pro-



cessing systems. Claims processing systems are in turn subject to numerous pressures which tend to erode the quality of data which they pass along to SUR. I submit that even the most cleverly designed and best managed claims processing systems will inevitably pass through a non-trivial level of erroneous data and will periodically fail to capture a number of important data elements. Erroneous or missing data will create all sorts of distortions on your provider and recipient profiles and you will expend endless hours in trying to determine if you have a valid but strange looking exception, or a data problem, or a system error.

To avoid this type of problem you should at the least arm yourself with an error analysis report telling you what types of data errors were encountered for each provider's claims. At best you should include a data error adjustment factor in your exception reporting technique. The Michigan SUR system is the only one I know of which has attempted to devise a solution to this data error problem.

### III. EXCEPTION REPORTING TECHNIQUES

#### A. Exception Weighting and Ranking

I would like to turn now to desirable SUR features related to exception reporting techniques. The most important exception reporting feature with which you should equip yourselves is a means to score or weight exceptions. Given such an exception weighting mechanism it is then possible to rank exceptors for review on a rational basis reasonably related to the possibility that you will find a real problem worth investigation.

A good deal of criticism has been leveled at earlier SUR implementations for their inability to control the volume of paper which they produce. I submit that this criticism is almost entirely misdirected. SUR, from its initial implementation in Ohio, has always possessed an effective paper volume control mechanism. The problem lies in the reliance of this mechanism on volume oriented indicator screens.

The original thinking was that if you could not investigate all of the exceptions produced by SUR then you should start with the high volume providers who had exceptions. If, for example, you could only look at 10 physicians then you

ought to look at the 10 who got paid the most money or saw the most recipients.

The problem with this approach is that after considering the top 10 exceptors, a conscientious SUR user will start wondering about what's going on with the second 10 and the third 10, and so on. And the only way to find out what's going on is to lower the values of the volume control screens and consequently produce more paper.

To resolve this dilemma you need a means to automatically evaluate each exception on a profile, assign a score to that exception and then compute an overall score for the entire profile. The score which you assign to each exception should at the least take into consideration the magnitude of the exception, the volume of services involved, and the importance of an exception on the given indicator relative to other indicators. A number of different techniques have been evolved to score or weight exceptions. I have a personal preference for the one first developed for the Indiana SUR design but there may be others which could be considered.

To my knowledge all of these various weighting and ranking techniques are based

entirely on the values of report indicators. It would be much more useful to have a weighting scheme based on the correlation of actual audit results to the indicators which first prompted the audit. The ultimate objective would then be to develop a functional relationship, or formula, into which you would plug the values of your exception indicators and from which you would receive the probability that an audit would produce useful results, or better yet, a projection as to the amount of money you could expect to recover from an audit.

A good deal of research and experimentation needs to go on before such a results oriented weighting technique can become a reality. The Illinois SUR people are working toward this end. I would hope that other SUR users will join in the effort.

#### B. Establishing Exception Criteria

Returning now to more routine SUR exception reporting features, I would urge you to provide for the greatest possible flexibility in the definition of exception criteria.

All of the Ohio type SUR systems allow you to establish exception criteria by any means which you may care to employ and then plug them



into the system via a control file. Quite a bit of study has gone into techniques for establishing exception criteria but there is still a lot of uncertainty and controversy as to which technique is most effective. Although I have several ideas on the subject, there is not enough time available right now to adequately discuss options in this area. I would, however, suggest that you provide for a comprehensive facility to analyze the distributions of the various statistical indicators which you decide to include in your exception process.

It is probably advisable to include a facility in your SUR system to compute basic means and standard deviations, and to produce both frequency distributions and percentile distributions. A capability to plot, or draw pictures, of the various distributions can also be a helpful feature.

If you feel a need to involve yourselves in more sophisticated statistical analysis techniques, I would recommend the use of one of the statistical software packages available in the public domain, SPSS for example.

#### IV. MANAGEMENT AIDS

Under the heading of management aids for SUR we have a blank page with respect to the earlier SUR implementations. The first entry I would make on this page is an automated case status monitoring capability. By this I mean a facility to log in each new SUR case and then track it through the various review, audit and corrective actions phases until a final disposition is reached.

The primary objective of such a case status monitoring capability is to make sure that each case moves along on schedule and does not get sidetracked or stalemated and never heard from again. But once you have established an automated case status file there are all sorts of useful management aids you can come up with: you can do work load balancing analysis with respect to your SUR staff; you can do personnel performance analysis; you can analyze the effectiveness of alternative review and audit techniques; you can do source reliability analysis - do you get best results from cases established from SUR summary profile reports, or from treatment analysis reports, or from your pre-payment UR screens, or from tips and complaints, etc. And finally you can easily accomplish performance accounting. You can, with computer speed and accuracy, impress your boss, your legislature, and the Feds with statistics on cases initiated, cases completed, dollars recouped, prosecutions initiated,

convictions achieved and all of those other intimate details which people are always hounding you for. Examples of case status monitoring techniques can be found in both the Indiana and Illinois SUR systems.

V. CONCLUDING REMARKS

In conclusion, I would like to observe that above all else the most desirable feature which should be exhibited by a SUR system or, for that matter, any information system, is that it interact smoothly and productively with its intended users. SUR is a problem solving methodology. so the features most useful in your SUR system are those that help to solve your problems. All of the features which I have mentioned today should be useful to most SUR personnel. However, only the individual State itself can decide what areas must be emphasized and what SUR system facilities are needed to meet the particular problems and needs of that State.

## II. CONFERENCE WORKSHOP WORKSHEETS



WORKSHOP WORKSHEET

DEVELOPING EXCEPTION LIMITS FOR PROVIDER PROFILES

Linda Bilheimer, PhD

## INTRODUCTION

The Medicaid Management Information System enables states to obtain and analyze large bodies of data about the recipients and providers in their Medicaid Programs. However, just as a little knowledge can be a dangerous thing, so also can too much knowledge be. Or perhaps we should say that having a great deal of data does not necessarily guarantee a great deal of understanding. It is the task of state review personnel to analyze the data generated and make meaningful judgements about the overall direction of the program, and the behavior of individuals within it. For both recipients and providers criteria have to be established, to which the pattern of services they receive or provide can be compared. It is the purpose of this workshop to discuss some of the major issues in the establishment of norms and standards for Medicaid providers.

## GOALS OF A UTILIZATION REVIEW PROGRAM

It is important to set goals because they affect the type of data needed. Tie into:

1. Relationship with utilization control
2. Local political constraints-clarify what actions can be taken
3. Local health care delivery problems and issues

### HOW CAN DATA HELP?

1. Understanding current medical practice - with caveats
2. Knowledge of patterns of care of individual providers - Do providers treat Medicaid patients differently? Are Medicaid patients different?
3. Contrast retrospective study of patterns of care - profiling-with pre-payment edits

### HOW ARE STANDARDS DEVELOPED?

1. Absolute standards - rational
2. Local standards - e.g. specified by local medical society
3. Peer group norms - i.e. rely on what data indicate is actually practiced.

### ESTABLISHING PEER GROUPS

1. Contrast specialty groups with type of practice groups - speciality in name vs. specialty in practice.
2. Area breakdown - rural/urban
3. Problems of small states - problem with multi-specialty clinics, especially for small states

### TYPES OF DATA TO BE ANALYZED

Relate back to goals.

1. Volume indicators
2. Ratio and percent indicators

### TYPES OF DATA TO BE ANALYZED (cont)

3. Study frequency distributions - Why are they so skewed? What is the significance of the right hand tail of the distribution? Relate back to II-1.

### HOW ARE EXCEPTION CONTROL LIMITS ESTABLISHED?

1. Fixed limits
2. Statistical limits-percentiles-means and standard deviations
3. Current limitations of "statistical" approaches. Problems of unequal and small sample sizes and statistical validity. Relate back to V-3 volume indicators. Chebycheff's Inequality ranking.
4. Problems of volume control
5. Possible new approaches - weighting

### HOW GOOD ARE THE BASIC DATA

1. Importance of studying claim forms and the whole data processing system
2. How good is coding and who does it?
3. What type of claims adjustment system is in operation?
4. What edits are in operation?
5. What is hand coded into system?
6. Examine control file - problems with new codes. Need for specificity.



WORKSHOP WORKSHEET

DEVELOPING EXCEPTION LIMITS FOR RECIPIENT PROFILES

Mike Hofmeister

## GOAL

SURS exception criteria must be developed and modified as needed to allow reports to effectively indicate recipients, whose use of MA services should be investigated further for possible misutilization.

## OBJECTIVES

1. Set priorities in the use of the exception reports.
2. Establish valid class groups.
3. Develop basic report items (as in management-level reports).
4. Determine exception report items.
5. Develop exception control limits for these items.
6. Modify items and limits as needed.

## PLANS

1.
  - a. Should exception reports be used to monitor all recipients and all services as a general type of surveillance, or are priorities used for review of specific areas?
  - b. If limited in scope, these priorities must be determined.
2.
  - a. What parameters do the state's SURS reports provide for class groups, e.g. age or aid category?
  - b. Determine all pertinent demographic characteristics of the Medical Assistance population, e.g. urban vs. rural counties, the

PLANS (cont)

number of MA recipients eligible through  
AID to the Disabled.

- c. Match the possible groupings with established priorities.
- 3. a. These are dependent upon the scope of service coverage in each state.
- b. These items should be as encompassing as possible because:
  - (1) exception items are taken from these,
  - (2) management-level reports have important uses, and
  - (3) these basic items are much more difficult to change than exception items.
- 4. a. These items are developed from the management-level report items.
- b. Exception items correspond to SUR priorities which have been set.
- c. What capabilities does the state have for using ratios, percentages, etc. for these items?
- 5. a. Should the limits be set to report all potential abuse for each item of service, or set to control the volume of exceptions?
- b. Limits will probably vary with individual class groups.

6. a. Modifications will be made as SUR priorities change.
- b. Changing medical practices may necessitate item and limit modifications.



WORKSHOP WORKSHEET

DEVELOPING EXCEPTION LIMITS FOR LONG TERM  
RECIPIENT PROFILES

Kent Gray

## WORKSHEET

### PROBLEM

A state has a population of 1.2 million, 107 free standing nursing homes, 25 rural hospitals with long-term-care capabilities, and 5 other long-term-care providers. Reimbursement under Title XIX in State X for long term care is based on three distinct levels of care: Skilled, Intermediate Primary, and Intermediate Secondary. Long term care in State X includes the following other programs: a comprehensive benefit program for recipients, an independent professional and medical review program, and an average census of approximately 3,800 patients under the Title XIX program with approximately 1,400 other nursing home patients (Medicare and private patients). How does State X develop realistic provider/client exception criteria to monitor these patients and providers?

### GOAL

Develop the appropriate number and kinds of provider/client exception limits, reflect the State's requirements for quality of care, avoid over utilization, under utilization, and fraudulent practices.

### OBJECTIVES

1. Development of realistic peer groupings.
2. Development of pertinent comparison criteria.
3. Establish meaningful exception limits.

## METHODOLOGY

### 1. Identify the various state LTC provider groups.

#### A. Nursing Homes

##### 1. Types

- a. IMR
- b. Psychiatric
- c. Geriatric
- d. Combinations of above

##### 2. Number

##### 3. Location

##### 4. Size (number of beds)

#### B. Other

##### 1. Mental LTC Hospitals

##### 2. Hospitals with LTC units (rural CIP Hospitals)

##### 3. County LTC Units

##### 4. Psychiatric Hospitals

### 2. Determine Data Base Needs.

#### A. Data Presently Available

##### 1. Claims processing units (billings of various providers)

##### 2. Medical Review Data

#### B. Necessary Data Not Available

##### Types of data that will indicate:

##### 1. Over Utilization

##### 2. Under Utilization

3. Fraudulent Practices
  4. Quality of Care
  5. Other
3. Establish Criteria for Peer Group Determination.
    - A. Level of Care
      1. SNF
      2. Intermediate Primary
      3. Intermediate Secondary
      4. Residential
      5. IMR - 1
      6. IMR - 2
      7. IMR - 3
    - B. Diagnosis
      1. Medical
      2. Psychiatric
      3. Mental Retardation
      4. Other
    - C. Types of Facility
      1. Free Standing LTC facility
      2. Other (mental hospitals, hospitals with LTC units, training schools, independent psychiatric units, etc.)
    - D. Geographic Location of Facility
    - E. Size of Facility - (Number of beds)
  4. Identify key comparison service classifications.
    - A. Master Exception Control
    - B. Physician Services
    - C. Pharmacy Care Section
    - D. Specific Treatment Section



## METHODOLOGY (cont)

E. Hospital Care

F. Miscellaneous Services

Lab/X-ray

Dental

Medical Supplies

Speech

Vision Care

Physical Therapy

Transportation

Audiology

5. Establish Data Base (Collection of Data).

A. Collection of Data Over Time

1. Minimum Time Frames

2. Maximum Time Frames

B. Quality of Data

1. Validity

2. Reliability

6. Establish Exception Limits. (System Variables)

A. Peer Grouping

B. Time

C. Intentions of the State Medicaid Program

D. Ability of State to Investigate Exceptions

(control paper)

WORKSHOP WORKSHEET

BACKGROUND REQUIREMENTS FOR PROGRAM PERSONNEL

Patricia Nelson  
Stuart Paterson

## PROBLEM

To identify the background requirements for SUR program personnel.

## GOAL

Develop a plan for optimal staffing of a SUR program in relation to background requirements of program personnel.

## OBJECTIVES

Identify optimal educational and experience background of personnel in relation to the following:

1. Provider case analysis and investigation
2. Recipient case analysis and action
3. Changes or enhancements to SUR computer reports
4. Budget for salaries

## PLANS

1. Identify qualifications for staff involved in provider case analysis.
  - a. Health professionals
  - b. Auditors, accountants
2. Identify qualifications for staff conducting field investigations of medical providers.
  - a. Health professionals
  - b. Auditors, accountants
  - c. Professional investigators
3. Identify qualifications for staff involved in recipient case analysis and action.

PLANS (cont)

- a. Social workers
  - b. Health professionals
  - c. Professional investigators
4. Identify qualifications for staff involved in changing or enhancing SUR Computer reports.
- a. Statistician or mathematician
  - b. Computer background
  - c. Health professionals
5. Identify salary ranges for personnel.



WORKSHOP WORKSHEET

COMMUNICATING THE PROGRAM TO PROVIDER GROUPS

Thomas A. Gaylord

## GOAL

The SUR Subsystem capabilities and program must be presented to provider associations and professional licensing boards.

## OBJECTIVES

1. Identify and establish communications with provider groups in the state.
2. Develop an awareness of the SUR capabilities among provider groups.
3. Share information with appropriate provider groups regarding patterns of practice in the state Medicaid program.

## PLANS

1. Select the large dollar volume provider groups in the state Medicaid program.
2. Identify the largest provider groups by number in the program.
3. Arrange appointments with the chief executives of the selected provider groups.
4. Set up meetings with the entire board of directors of the selected groups.
5. Participate in state conventions and annual meetings of provider groups through booths, exhibits, workshops, and formal presentations.
6. Develop slide shows specifically designed to show profiles of the provider groups you are addressing.

PLANS (cont)

7. Include a historical introduction and explain the Federally mandated role of SUR units.
8. Describe the organization of the SUR unit and the background of key personnel.
9. Briefly show the capabilities of the profile system in the recipient area and in other provider areas to let the group know that they are not being "singled out".
10. Discuss your State's data privacy act with your Attorney General's office or other appropriate legal counsel.
11. Offer selected management summary information to professional associations and boards on a quarterly basis as runs come out.
12. Offer information on specific providers to state boards if privacy laws permit.

WORKSHOP WORKSHEET

TRAINING PROGRAM PERSONNEL

Bernice Koski



## BACKGROUND

The State Legislature has mandated increased surveillance and utilization review of Medicaid expenditures. At the same time the legislators earmarked funds to increase the Bureau of Surveillance & Utilization Review by 12 analysts and investigators plus other support personnel.

This two-fold increase in S/UR staff has many ramifications:

1. as supervisory span of control is broadened, new policies and procedures for the conduct of routine activities must be instituted;
2. increased scrutiny of Medicaid expenditures at local, State, and National levels demands that existing and additional staff must be led to higher and more professional levels of performance in a minimum of time;
3. expanded and more sophisticated data processing capabilities have been developed with the Department. (EOMB, additional information)

As the new analysts and investigators were identified and selected, the problems began to take shape:

1. different levels among selectees of familiarity with management information and data processing systems;
2. diverse experiential backgrounds of selectees,
  - a. 2 nurses

## BACKGROUND (cont)

- b. 3 transfers from other State Departments
  - c. 1 pharmaceutical background
  - d. 1 county welfare staff
  - e. 1 welfare hearing section
  - f. 2 claims processing (supervisors)
  - g. 1 fiscal review (audit background);
3. existing staff of S/UR had a wealth of knowledge and experience which had to be shared with new staff members;
4. Supervisory span of control was too great for adequate one-to-one contact with first line of supervision;
5. no help would be forthcoming from other supervisors - even active resentment could reasonably be expected.

## PROBLEM

Obviously you are confronted with a training problem - or opportunity! Training and procedural manuals are essentially correct as far as they go, but are sadly out of date. Existing workloads do not permit thorough and comprehensive revision of this material. Training aids are limited to an overhead projector; training budgets an idle dream.

Suppose the Medicaid Program in your State has these

PROBLEM (cont)

characteristics:

1. serves 700,000 recipients;
2. service rendered by 32,000 providers;
3. the reporting system identifies,
  - a. 3,600 exceptional providers,
  - b. 8,600 exceptional recipients;
4. yearly expenditures are 1.3 billion dollars;
5. offers a broad range of coverage including optional services;

what training program issues will you want to address?

Now it's up to you to develop a plan to train the new staff to function effectively.

I. PROBLEM: 12 - 16 new employees of diverse backgrounds, functional disciplines and educations.

II. OBJECTIVE: Not Discussed

III. LIMITING FACTORS TO DEVELOPMENT OF PLAN:

Budgets, time to prepare training, time to conduct training.

IV. THE MAJOR LIMITING FACTOR:

Only one week in which to conduct training can be spared.

V. ASSIGNMENT:

Complete this outline in committee using circumstances and conditions as they exist in your State:

1. Factors bearing on development of plan.

2. Write the Plan including:

a. goals

b. methodology and strategy

c. expected results

Obviously, the following anticipated steps must be completed at your home office, if you were going forward

with the plan.

VI. COORDINATE AND MODIFY:

VII. FINALIZE PLAN:



WORKSHOP WORKSHEET

USER ROLE IN IMPLEMENTATION OF S/UR

Michael Tristano

## BACKGROUND

Your State has implemented an S/UR system. This system was created by your Information Systems Department through a contract with an outside consulting firm. This firm received the bid for the project by submitting a significantly lower dollar estimate (\$200,000) than its nearest rival. The reason for this low bid was that this consulting firm had previous experience in implementing S/UR systems in other States which they felt was transferable in toto. Basically, they intend to adapt the other State's soft-ware package to yours with minimal changes. For our purposes, we will narrow the focus of our discussion to the area of physicians and their field audits.

## SYSTEM

Any physician can be run and a provider detail computer printout will list all direct services for either provider name or number. An option would give the user the capability of selecting a random sample of services by either assistance unit or patient. All data will be printed on IBM paper and a maximum of twenty (20) providers can be processed during one cycle.

## PROBLEM

You have discovered a group practice which is billing procedure codes to maximize payment, rather than those which are totally correct.

## OBJECTIVE

1. To recover overpayments
2. To correct the aberrant pattern
3. To determine whether clerical error, misconception of billing procedures or fraud caused incorrect billing procedures

## OPTIMUM TECHNIQUE

Have the ability to extract one statistically valid random sample of provider detail combining payments of all members of the group practices simultaneously via computer.

## LIMITATIONS

System described cannot accomplish the optimum technique previously stated due to:

1. only one provider's sample can be run;
2. no user option to modify the existing software package; and
3. no definer available to identify the billings in question as being those of a group practice.

## RESULT

Each individual practitioner within the group practice would be audited individually. This technique, limited by system constraints, would increase the field work by a factor equal to the number of practitioners within the group practice less one.

## PROBLEM

You have discovered a "Medicaid mill" operating within your jurisdiction. Elements of your work plan include:

1. auditing all providers at the location, and
2. compiling a listing of all services either direct or indirect.

## OBJECTIVE

1. To recover overpayments.
2. Verify whether exceptional utilization patterns exist.
3. Determine whether facility has any indications of "gang visiting".
4. Determine whether facility has any indications of "ping-ponging".

## OPTIMUM TECHNIQUE

1. A statistically valid audit sample should be produced for the entire location.
2. The computer system should have sufficient screening mechanisms to determine the rate of potential "gang visiting".
3. The computer system should have sufficient screens to determine the rate of "ping-ponging" individuals.
4. The computer system should have the capability of listing all individuals treated at the location

### OPTIMUM TECHNIQUE (cont)

who fall within the parameters listed in 2 and 3.

### LIMITATIONS

In regard to auditing the situation is identical to those discussed in Problem 1. Additionally, a working definition of "ping-ponging" and "gang visiting" is not programmed, thus exceptions cannot be identified without manual screening.

### RESULT

Full listings of each practitioner's billing would be generated and manual processing would be required to screen and determine the proper cases for investigation. Potential instances of "gang visiting" or "ping-ponging" could be selected through an arduous manual screening process.



WORKSHOP WORKSHEET

MONITORING THE PROFESSIONAL STANDARDS  
REVIEW ORGANIZATION

Sam Rutch

## SCENARIO

The State has an option to monitor the implementation of the PSRO Concept. You are requested to make your recommendations. The State is advocating "cost containment" in the hospital area. The President of the U.S. recently addressed this problem. The pros and cons are contained in the S/UR file which you have been given. Your Chief is pushing for monitorship, so your supervisor is interested in your choice. You go the monitorship route - obviously.

The State has an ADP system; however, it does not need to be used. Blue Cross/Blue Shield have a complementary system and may be used, or a combination of both, or neither.

The PSRO's State Hospital Association, and Medical Affairs Institute are not too elated about the possibilities of a State Plan. HEW leaves the options and methodology up to the State but promises to withdraw financial support if the plan doesn't meet certain guidelines.

You've got the ball! No help in your venture is promised. You must go it alone. Where do you start?

Consult your reading file for basic guidance and adapt your thoughts to the situations that prevail in your State.

What is your best route?

## PROBLEM

To develop a plan to monitor integrity and effectiveness of PSRO activity.

## OBJECTIVE

To assure that PSRO review does not pose a threat to the fiscal integrity of the State's Medicaid programs.

## LIMITING FACTORS TO DEVELOPMENT OF PLAN

1. Types of available data not suited to monitoring.
2. Needed resources are not available or programmed.
3. Automated data collection system not available.
4. PSRO framework not in operation to afford planners PSRO views.
5. Optional or performance standards not developed or collected.

## THE MAJOR LIMITING FACTOR (most limiting)

Needed resources are not available or programmed.

## FACTORS BEARING ON THE DEVELOPMENT OF PLAN

1. Cooperative relationships must be established with the PSRO and other State medical organizations.
2. Long lead time is required before PSRO review can be fully implemented.
3. State expenditures will be matched by DHEW for a variety of non-duplicative monitoring techniques.
4. PSRO exercises final authority on issues of

#### FACTORS BEARING ON THE DEVELOPMENT OF PLAN (cont)

- medical necessity and quality of care for claims payment.
5. PSRO review decisions are binding on the State and existing utilization review systems will be superseded by PSRO review.
  6. Prior authorization for elective Title XIX admissions must be eliminated by the State.
  7. Draft Manual for Medicaid Agency Monitoring of PSROS (May 10, 1977, MSA and BQA) contains basic guidance affecting development of the plan.
  8. Support provided by the individual State Legislatures will determine to a large degree the type of monitoring system developed.

#### CRITERIA THAT THE PLAN MUST MEET

1. Plan must be viable and acceptable to the PSRO and State medical associations.
2. Plan must be objective and reduce the subjective elements to an absolute minimum.
3. Plan must be workable, defensible, acceptable, supportable, logical, reasonable, have a sound data base, be objective, etc.
4. Plan must conform to Program Instructions outlined in DHEW letters:  
  
Action Transmittal/SRS-AT-76-140/Sep 3, 1976  
  
Action Transmittal/SRS-AT-76-141(MSA)/Sep 3, 1976

#### CRITERIA THAT THE PLAN MUST MEET (cont)

Action Transmittal/AT-77-43/Apr 15, 1977

5. Suggested criteria are contained in: Draft Manual for Medicaid Agency Monitoring of PSROS by MSA and BQA dated May 10, 1977.

#### RESOURCES AVAILABLE

Not discussed.

#### ASSUMPTIONS ESSENTIAL TO DEVELOPMENT

Not discussed.

#### DATA SOURCES AVAILABLE FOR UTILIZATION

1. Studies by the Commission on Professional and Hospital Activities (CPHA)
2. Professional Activities Studies (PAS)
3. State Medical Association Statistics
4. Blue Cross, Blue Shield, or other commercial health insurance agencies
5. Draft Manual for Medicaid Agency Monitoring of PSROS, May 10, 1977 (Distributed by MSA/BQA)
6. PSRO Management Information System (PMIS)
7. State's Management Information System for Medicaid.
8. Action Transmittal Information listed in VI, above.
9. Developed plans in operation in California and Maryland.



DATA SOURCES AVAILABLE FOR UTILIZATION (cont)

10. Plans of other states in the development (coordination) stage.

METHODOLOGY TO BE USED

DEVELOPMENT OF ALTERNATIVES - ACTIONS

TESTING OF ALTERNATIVES - ACTIONS

CONCLUSION ON A COURSE OF ACTION

WRITE THE DRAFT PLAN

COORDINATE AND MODIFY

FORWARD FOR FEDERAL APPROVAL

### III. CONFERENCE CRITIQUE

## CONFERENCE CRITIQUE

As part of a continuing effort to maximize the efficacy of conferences sponsored by the Institute of Medicaid Management, participants were asked to evaluate the June conference. The evaluations were transmitted on conference critique questionnaires distributed at registration and collected during the course of the conference. A summary of participant responses follows, along with a sample of the critique itself.

## GENERAL ASSESSMENT

Nearly ninety percent of the responding participants expressed general satisfaction with the conference. Nearly all felt that it had provided a useful forum for discussing common problems and exchanging information between state personnel. Several also noted that the social events associated with the conference (e.g. social hours, buffet luncheon) provided a unique opportunity to meet with federal and other State officials on an informal basis.

The only general reservation expressed by conference participants concerned the lack of information on pending legislation, policy, and guidelines; nearly ninety percent of respondents noted a desire to have more presentations by federal personnel on this subject.

Nearly all participants agreed that the list of topics covered during the conference covered the subject

of Patient Provider Profiling (S/UR), although many expressed a desire for more workshops and in-depth discussions of the covered topics. At the same time, however, few participants expressed a desire for a longer conference and many recommended it be somewhat shorter.

#### BEST AND WORST FEATURES

When asked to identify the "best" features of the conference participants expressed a tremendous variety of perceptions. Among the most common responses were:

1. exchange of information between States, Regions, and Federal personnel
2. workshop presentations and atmosphere
3. efficient organization of conference time schedule
4. informality
5. participation of highly knowledgeable individuals

Participants also identified an assortment of "worst" features, including:

1. inadequate visual material (esp. slides) and A/V equipment
2. too few handouts of speakers' material
3. inadequate overview of MMIS/S/UR

#### WORKSHOP WORKSHEETS

A unique feature of the workshops conducted at this conference was the use of "workshop worksheets" for identifying prototypical problems, program goals and potential

### WORKSHOP WORKSHEETS (cont.)

solutions. These generated a very mixed reaction, with some participants regarding them as very useful, others as a waste of time. The response received suggest that the efficacy of the worksheets depends heavily on the extent to which the workshop leader chooses to use it and how well it is integrated into his presentation. When they are not carefully integrated and used, the worksheets are not productive.

### FUTURE CONFERENCES

In addition to providing specific topics for inclusion in the planned conferences on Institutional Reimbursement (July 19-22) and Assessment of Resident Care in Intermediate Care Facilities for the Mentally Retarded (September 7-8), participants indicated subjects that might serve as the focus of other conferences. Considerable interest was expressed in PSROs and their relations with Medicaid. Interest was also expressed in further fraud and control work, especially techniques for detection, investigation, prosecution and recovery.



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